



CONCRETE STORAGE ANNEX AND CHIMNEY FOR THE NASHVILLE WAREHOUSE & ELEVATOR COMPANY, NASHVILLE, TENN.
 Macdonald Engineering Company, Chicago, Engineers and Contractors.
 [For description see following page.]

NASHVILLE WAREHOUSE AND ELEVATOR COMPANY.

The improvements to the elevator plant of the Nashville Warehouse and Elevator Co., which have been under way during the past building season, were recently completed by the Macdonald Engineering Co. of Chicago and were put in successful operation in November.

The warehouse portion of these buildings was originally the passenger depot of the Nashville & Decatur Railway Co., one of the first railway terminals in Nashville. The site of the property is historic ground. It received its baptism of blood during the Civil War, being under the frowning battlements of Fort Negley, which has long since disappeared except in dim outline. The main elevator building, with the stereotype profile, was built 20 years ago, and has several times been brought up or let down to date by internal changes and external contortions, as demanded by the ever-changing conditions of the grain trade.

The necessity for more storage became a live issue with the Nashville Company over a year ago; and at one time it was practically decided to adopt the old style of wood construction for the annex. Mr. D. S. Williams, president of the Company and one of the leading bankers in Nashville, became convinced that from a commercial point of view the day of the wooden elevator building had passed into history, and instituted a thorough investigation of what had been accomplished in, and the possibility for, fireproof construction in this line, which resulted in the adoption of re-enforced concrete as the material best suited, by virtue of its durability, strength and economy in first cost.

The concrete annex has a holding capacity of more than 200,000 bus., providing a total storage capacity for the Nashville Warehouse and Elevator Company of one-half million bushels. The concrete annex is divided into 56 separate bins, ranging in capacity from 1,000 to 6,000 bushels each. The plan of arrangement consists of a series of octagonal and square bins, 65 feet deep, carried on a concrete foundation over an open basement story about 8 feet high, all built, including roof structure, in monolithic, re-enforced concrete construction. The space between the old and new buildings is occupied by two receiving railroad tracks and covered between the two buildings with a train shed, making an enclosure in which all cars of grain are received and unloaded. The track hoppers extend under both tracks and are connected with the machinery of the old elevator by means of belt conveyors in concrete vaults under the track hoppers. All grain received is first sent into the old building, where it is weighed and discharged from the scale hoppers upon belt conveyors which carry it to the new concrete storage bins. A corresponding set of conveyors in the basement, reaching to the elevator legs of the old building, provides means by which the annex is emptied. The basement is covered over its entire area with a concrete floor, and all spouting, machinery fixtures, windows, doors, etc., are of fireproof materials. All floors and walks above the bins, including the enclosing walls and roof, are also of re-enforced concrete, so that no combustible material of any kind is left in the construction of the building.

The system of re-enforcing adopted throughout was high carbon steel rods, which were brought on the structure in large coils, straightened by special machinery and cut off to the lengths required, so that in all cases where the re-enforcing rods had to extend the full length of the building or make the complete circumference, they were cut on the job to suit. An ingenious system of combined forms and scaffolding was used, by which the whole apparatus was raised continuously during the progress of the work and the pouring of concrete into the forms.

The machinery of the old building was thoroughly overhauled and placed in first-class working order during the past season. New cleaners and

clipping machines, with an improved dust collecting system, were installed; two new boilers were added to the plant; the new concrete chimney shown in the cut was erected under the same system as the other—re-enforced concrete—by the Macdonald Engineering Co. An additional steam engine was installed, together with new car pullers, power shovels, car loading spouts, and a No. 6 Hess Pneumatic Grain Drier, making the plant now one of the most modern and efficient of its kind and capacity in the South.

The transmission and conveyor machinery was all furnished by Stephens-Adamson Manufacturing Co. of Aurora, Ill.; the cleaning and clipping machines were furnished by the Invincible Grain Cleaner Co. of Silver Creek, N. Y.; the dust collecting system by the Allington & Curtis Co. of Chicago, and the pneumatic grain drier by the Hess Warming & Ventilating Co., Chicago.

GEORGE J. NOTH.

A change of interest to grain elevator concerns in the Central West was made recently, when the Invincible Grain Cleaner Co. of Silver Creek, N. Y., placed its Chicago office under the immediate charge of George J. Noth of



GEO. J. NOTH, CHICAGO.

Davenport, Iowa. In securing the services of Mr. Noth it looks as though the Invincible Company has made one of those "finds" that manufacturers like to make; for although Mr. Noth is a comparatively young man, he has had an extensive elevator and malt house experience. He is gifted with good common sense and has much ability in the particular line toward which his study and experience for a number of years have tended. A good mechanical training was secured at the University of Illinois and an electrical education at the Armour Institute at Chicago.

It was during his practical elevator experience that he became more intimately acquainted with the Invincible line of grain cleaning machinery, but he had had opportunity previously to study the operation of these machines, when, as employe of the builders, he had had frequent occasion to install them in elevators planned and constructed by the MacDonald Engineering Co., with which company he was identified for a long time prior to entering the University of Illinois. His mechanical and electrical education and practical experience naturally give Mr. Noth a clear understanding of the mechanical possibilities of the machines made by the company he now represents and these will be of material benefit to him as a salesman as well as to the patrons of his office and his present employers.

His territory embraces western Indiana, Illinois, Iowa, northern Kentucky and Wisconsin.

Mr. Scott, who is succeeded at the Chicago office by Mr. Noth, has charge of the entire Northwest for the Invincible Grain Cleaner Co., and is also traveling representative for the Strong & Northway Co. of Minneapolis.

[For the "American Elevator and Grain Trade."]

THE LATEST "MIDNIGHT TARIFF."

BY F. S. RUTHERFORD.

If any doubt has heretofore existed in the mind of any interior grain shipper, or of anyone connected with the grain interest at the primary markets, of the necessity of increased powers being conferred upon the Interstate Commerce Commission that would enable that body to prevent rate discrimination by the railroads, it should forever be eliminated by recent developments that convict the Gulf lines and the Chicago, Milwaukee & St. Paul Railway, in connection with the Eastern lines, of having granted to certain favored shippers special rates that are materially lower than the published tariffs at the time they were granted. The fact that these reduced rates are now made public, so that technically they are open to the world, does not palliate the action of the guilty roads, nor does it lessen the measure of discrimination.

The favored ones, for whose sole benefit these special rates are made, were apprised of the intention to promulgate them long before their promulgation, enabling them to pay higher prices for corn in trans-Missouri territory than their competitors were able to pay on published tariff rates, and so to contract millions of bushels of the grain. And these favored shippers having contracted the corn, what does there remain for the public to work on, even though the cut rates are now become published tariff?

But, notwithstanding these rates are made public, they are still discriminatory in that they can only be used on a certain character of business and over certain routes. They cannot be utilized in handling business through any of the primary markets, such as St. Louis, Chicago or Peoria. They can be utilized by only a limited number of firms who are engaged in the export trade and who find it practical to route their shipments over the lines implicated in putting out these rates. But even though, theoretically, these rates were applicable through the primary markets of St. Louis, Chicago and Peoria, of what possible benefit could they be to the general grain trade when a few firms, through prior knowledge of the intention to promulgate such rates, have secured control of practically all the corn that will move for the next 60 days and of the railroad equipment necessary to move it?

The course pursued by the railroads now is but a repetition of the tactics employed last winter. Evidently made bold by the fact that their "midnight" tariff practices of a year ago were not investigated and ventilated by the Interstate Commerce Commission, they seem to think that they can with impunity defy the laws of the land. Can there be any plainer case of an act in restraint of trade? Have they not, by apprising certain firms in advance of a proposed reduction in rates for their benefit, compelled the country grain dealer in Kansas and Nebraska to sell their corn only to these certain firms? Have they not, by withholding from the general trade the knowledge that these reduced rates were to be effective at a certain future time, prohibited them from paying prices equally as high as could be paid by those having the prior knowledge? Have they not, by making these reduced rates applicable only on a special character of shipments, routed through certain gateways, prohibited the great majority of the grain trade from competing for the corn business in trans-Missouri territory?

Is the interior grain dealer satisfied with the idea that he must sell his grain to certain firms? Does he not realize that open competition would be to his advantage? Does he relish the thought that he is forced to sell his corn basis certain destination

weights and inspection, or accept a much lower price for it? Is it to his liking that he is prevented from doing business with firms not affiliated with the "midnight" tariff proposition, but with which firms he has probably enjoyed a long and pleasant acquaintance, and with whose manner of handling his business he has been highly pleased? Is it an agreeable thought to him that he is forced into being a party to these illegal practices of the railroads, in that he furnishes the grain that makes them possible?

Where is there any right or justice in these things? A highwayman will take what you have about your person, leaving you what you may have at home or in bank. But rate discrimination by a railroad will take from a business man and his employees all they possess. It takes the shoes off of his children's feet and the bread out of their mouths. It deprives men of their homes, leaving their wives and little ones with the canopy of heaven for a roof, and cold wintry blasts for their portion instead of a place at a warm hearth. It stamps upon his brow the ignominy of pauper and of a man who does not pay his honest debts. Not, though, because of lack of talent or industry on his part. Oh, no; the most talented, industrious and scrupulous men engaged in business are among those who do not enjoy rate favors at the hands of the railroads. It is because that which is his own by right of his heaven-given faculties and industry is taken from him and given to the recipient of cut rates, who is thereby enabled to live in a mansion and feast upon the fat of the land. The picture is not overdrawn; it is true to life.

How can any member of Congress having a son entering upon mercantile pursuits disregard the conditions that await that son unless some restraint is placed upon the railroads of the country? Must he not await with fear and trembling the outcome of his undertaking? Does not his reason tell him that, whether his son engages in grain or merchandise, if his competitors enjoy a less charge for freight on the goods handled than he must pay, it is only a question of time that he will be compelled to give up the battle or wind up in the bankrupts' court? But even though this member of Congress has none of his own flesh and blood that are affected by freight rate discrimination, can he view with unconcern his fellow citizens suffering thus at the hands of the railroads? Will not his patriotism, his love for tens of thousands, aye, millions of his countrymen, constrain him to cast his vote for some measure that will restrain the traffic managers from wronging the public and the shareholders in railroad properties?

Quite likely, and it may be said most probably, the present Congress will enact some legislation that will regulate freight rates by federal control. But what will St. Louis, Chicago and other primary markets do in the meantime? Are they to be deprived of handing their rightful and natural share of this corn crop? Is it not a practical proposition that all corn contracted prior to the open publication of the cut rates should pay the rates shown in published tariff in force previous to the recently published tariff, even though the corn is shipped subsequent to publication of the cut rates? It seems to be a reasonable proposition, for, even though the corn be shipped subsequent to, it was contracted at a time when there was no general knowledge of the proposed promulgation of these lower rates.

Obviously, the railroads and the exporters, both, make a mistake as affecting their own interests in the manner of handling this export grain business. If the roads will let the grain flow in its natural course to the primary markets of the country, the grain-carrying roads of the West will handle the same amount of tonnage and at normal rates of freight. The grain is there to be transported, and in far greater quantities than the roads have the equipment to handle. Then, after the grain has taken its natural course into the primary markets and accumulated in large quantities, the exporters can secure supplies there with much greater convenience and at less cost than by card bidding the

interior. And the Gulf lines and the Atlantic seaboard lines will be able to secure all the tonnage they can possibly take care of at the primary markets from which they diverge.

St. Louis, December 7, 1905.

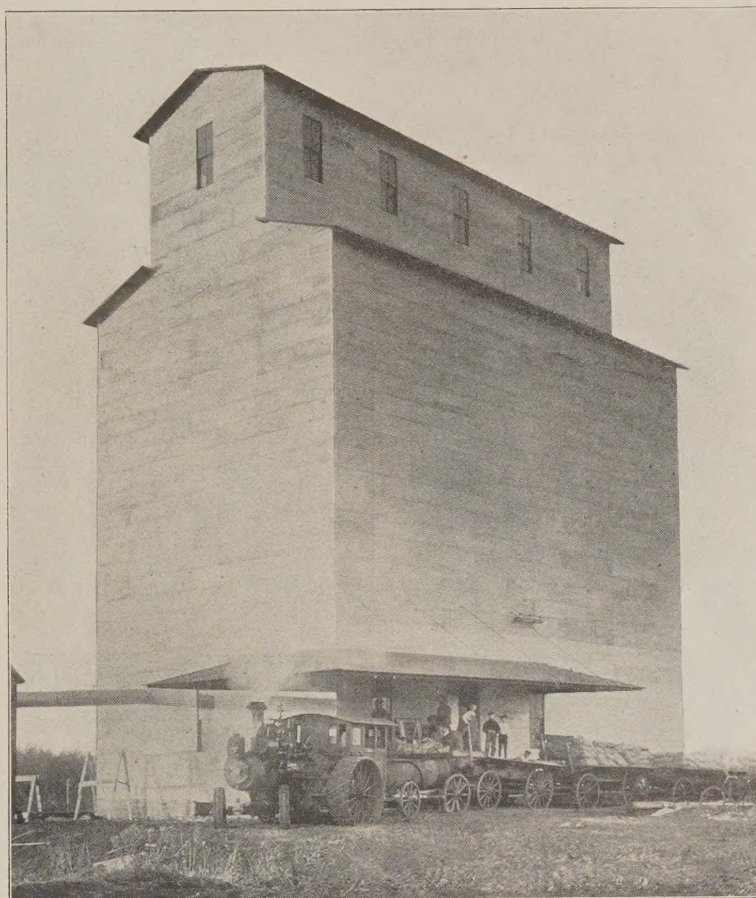
PEDDLING CARS TO STOP.

"While the unprecedented grain crop of the present year has to do with the present shortage and while frequently the demand for cars for the shipment of coal causes a shortage of grain cars, one of the principal causes of the shortage is the 'peddling' of cars," said Secretary Riley of Indiana Railroad and Warehouse Commission, to a press reporter recently. "This matter will be taken up by the Commission and strong pressure

BOZEMAN ELEVATOR CO.

Bozeman, Mont., is located in the very heart of the famous Gallatin Valley, which locally they delight to call the "Egypt of America," a title, however, that for one reason or another has been claimed by other sections of the country, including the delta of our own state of Illinois. But the Gallatin Valley's fame as a producer of Chevalier barley is beyond dispute, that perfect grain's renown having long since penetrated even to the great brewing centers of Continental Europe, whose maltsters have long been heavy buyers of this barley, as have exacting maltsters of our own country.

But barley is not the only cereal product of the Gallatin Valley, where a hundred bushels of



BOZEMAN ELEVATOR CO.'S PREMISES, SHOWING TRACTION ENGINE AND TRAIN OF WAGONS.

brought to bear upon the railroad employees who have been guilty of the practice.

"A grain man has ordered five empty cars with which to move the grain in his elevator. The elevator is full and he is depending on the cars. Another grain man up the road offers the train crew a sum of money for the cars, and he receives them. An elevator has been known to be held up for fourteen days because of this arrangement. Again, the train crew on a local freight unloads two or three way cars on the down trip and these cars are disposed of to elevator men, the trainmen often receiving as high as \$15 a car. The car distributor at the terminal should receive these cars and they should be sent out, with others, where needed the most."

The Commission will undertake to put a stop to this unfairness, as well as to the discrimination of allowing empties to stand at junction points for the benefit of shippers there. The Commission will also ask Indiana roads to favor Indiana shippers before foreign shippers.

The lessee of the Great Northern Railway Elevator X has bonded 34 bins for handling Canadian wheat. The storage capacity is about 500,000 bushels.

oats and fifty bushels of wheat are by no means uncommon; rather, are very common yields. Bozeman contains five elevators and there are several others at different places in the valley; and it is estimated by a local authority that no less than a million bushels of hard and soft wheat alone were marketed in Bozeman up to November 22, when a 10-inch snowfall temporarily put a stop to the hauling; yet there was some shortage in wheat around the foothills, where there is a good deal of dry-land farming. Barley, too, was not quite so good a crop as last year. This crop went to Milwaukee maltsters and to Duluth for export to Germany. Most of the oats are consumed in Montana.

Our illustration is a picture of the new elevator of the Bozeman Elevator Co., erected during the past season. It is a cribbed structure 36x60 feet in size, clad with galvanized corrugated iron. The elevator has 75,000 bushels' capacity and is equipped with cleaner, oats clipper, feed mill and a 25-horsepower electric motor. The premises are lighted by electricity, have city water inside, telephone and track connections with the N. P. Ry. In short, it is a complete modern elevator capable of handling a large business properly and promptly.

GRAIN DEALERS DINE AT PEORIA.

The Grain Dealers' Association of Central Illinois might be termed a universal brotherhood, limited geographically to Illinois territory. If one were to ask C. C. Miles of Peoria the name of the Association he would probably term it the Grain Dealers' Association of Central Illinois. If he propounded the same question to Mr. Brooks of Bloomington he would as likely as not answer that it was the Central Illinois Grain Dealers' Association. It is only necessary to include the words "Central Illinois" and "grain dealers" and there is probably none of its members who would quarrel with you over the official title of the organization.

The constitution of the Association, like that of Great Britain, is unwritten. It has not been transmitted as yet from father to son, but as there is plenty of good youthful stock in the organization, descent of its by-laws to posterity is a question of time only. Its members pay no fixed fees or dues, but only the expenses incidental to a dinner or the meetings at Peoria, which are held monthly. The territory it covers ranges from fifty miles north of



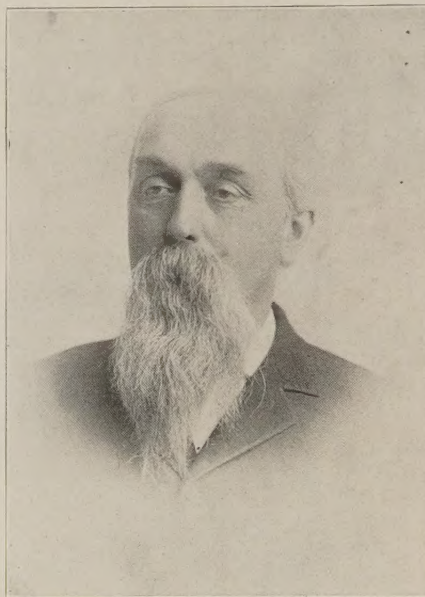
C. C. MILES, PEORIA,
Of Committee of Arrangements, Peoria Board of Trade.

Peoria to fifty miles south, and extending west as far as the Mississippi and limited on the east by the boundary of the state of Indiana.

The subjects for discussion of this organization are only those common to a large brotherhood of men engaged in the same industry. Perhaps for one evening there will be a paper by Mr. Simpson of Minonk on the cost of operating a country elevator. Or it may be an address by Mr. Baldwin of Decatur on how to conduct a country elevator. Such topics as these, including questions of car famine and how to secure better car service, rate matters, etc., are gone over, together with the idea not only of conducting the grain business with fair profit and advantage to themselves, but of carrying on the business as a whole to the greater good of the grower, the country buyer, the terminal handler and all concerned.

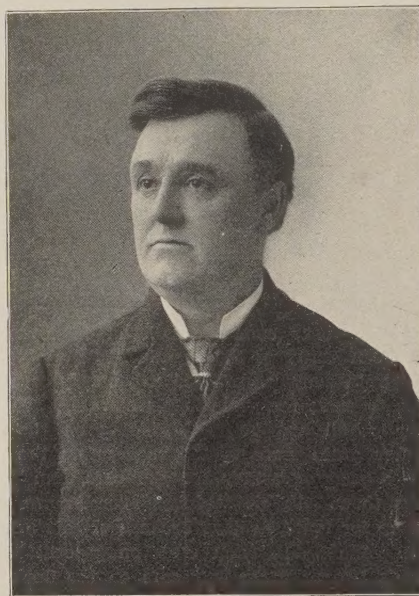
The meeting of the organization on January 5 took the form of a banquet which was given in Hotel Fey at 8 o'clock. The speakers on the occasion and guests of honor were M. F. Dunlap of O'Fallon, Mo., president of the Grain Dealers' National Association; G. W. Hubbard of Mt. Pulaski, Ill., president of the Illinois Grain Dealers' Association, and Capt. A. P. Rumsey of Chicago. There were upwards of seventy-five grain men present, and when the doors of the large dining room were thrown open and the harp sounded the opening notes of an overture, it was a brilliant assemblage of grain men that took their places at tables that had been handsomely decorated for the occasion.

After the coffee and cigars President E. Roberts of Peoria, preceding the introduction of the toastmaster of the evening, A. G. Tyng Jr., of Peoria, made a short address. He made complimentary mention of the Chicago commission men who lent their presence to the occasion, and thought it would be right, fitting and proper that each dealer, on returning home, provided he could secure cars, should ship a car of grain to each of those attend-



E. ROBERTS, PEORIA,
President Central Illinois Grain Dealers' Association.

ing. He expressed sorrow at the death of the mother of R. W. Van Tassell, which had occurred the night previous and which caused the absence of Mr. Van Tassell from the dinner. Continuing, Mr. Roberts said, in part: "As to our Association work, there is probably no class of men who have done so much for their patrons as the country



M. F. DUNLAP, O'FALLON, MO.,
President Grain Dealers' National Association.

grain dealers. They have frequently borrowed money at the bank at 6 per cent and loaned it to patrons for nothing. Often they have loaned their grain storage to the farmer for nothing. In meeting together we promote a friendly feeling among ourselves, and we learn to practice the golden rule when dealing with others. There is probably no class of business men concerning whom worse things have been said the past few years than the country grain dealers. Former erroneous opinions are changing, however, and as the truth becomes better known, the past should be forgotten."

Mr. Tyng, as toastmaster, left nothing lacking

to the proper performance of the duties of that important office, and introduced as the first speaker of the evening M. F. Dunlap of O'Fallon, Mo., who responded to the toast, the "Grain Dealers' National Association." Mr. Dunlap spoke substantially as follows:

"I was glad when I received the invitation to come to this city and be present on this occasion. I am not here because there is any money in it, but because I wanted to come. I like to come back to my native state and see its fertile valleys, broad fields and thriving cities. I wanted to look into the faces of men who had the sagacity and common sense to assemble together for counsel and advice and to meet once a month the year around. There is a great deal of good resultant of this meeting together and becoming acquainted with one another. I see many young men before me; and I want to say there is something in life besides dollars, stocks and bonds and all kinds of securities. It may be a digression, but it suits my fancy to say that we are created a little lower than the angels



A. G. TYNG JR., PEORIA,
Of Committee of Arrangements, Peoria Board of Trade.

and in the image of our Creator. We have a mind that revolves, decides, accepts, rejects. We have the power to compel the forces of nature, and we ought to have a high opinion of our worth to ourselves and our worth as members of the state.

"If there is anything I love to do it is to meet with a man of higher character than myself; a man of broader sympathy, higher ideals and keener intellect. It gives a higher view of things to meet with such men. I never met a finer body of men than at Niagara Falls. I felt the inspiration and uplift which is given by men of such character. These men went down into their pockets and laid \$2,500 on the altar of association work without hesitating. We are living in a peculiar time, when from the lowest to the highest walks of life organization counts for something. It is an era of organization. Things are moving swifter than they were when the old ox team was used to transport goods to market. If the driver of that team could have seen the railroad train he would have dropped his whip in amazement. If he could have seen our terminal elevators he would have said that he saw the eighth wonder of the world.

"As to the National Association I want to say that we are breathing new life. We stood a hard blow at Niagara Falls when so many state associations withdrew their support. We have a good secretary who is doing excellent work and the Association is growing rapidly in its individual membership. We still have the money raised at

Niagara Falls with all debts paid. We must either conduct national affairs on national lines or disintegrate and let the state associations carry on the work. There are questions, however, that you do not take up at state meetings. There is the question of giving the Interstate Commerce Commission power to say what is a fair rate. There are other important national questions, and if the grain dealers of the country would give \$1 each, we could do mighty work for the general cause.

"I ask you to stand back of the National Association as you ought to do, and I am here to tell you that the Grain Dealers' National Association is doing the best it can do under the circumstances and with the means at its command."

Toastmaster Tyng introduced G. W. Hubbard of the Illinois Grain Dealers' Association. Mr. Hubbard's remarks were interspersed with bright stories illustrative of the various points which he desired to emphasize. He paid special attention to the thought that the selfish spirit so prevalent in business should be obliterated as far as possible. Meetings of grain men are largely educational and their advantages should not be neglected by the dealer who wishes to conduct a satisfactory business.

Capt. I. P. Rumsey of Chicago was next introduced by the toastmaster, who responded to "Chicago." Captain Rumsey thanked the president and toastmaster for the kind words that they had spoken for the "City by the Lake," and said that it was a great pleasure to him to meet with the Association. He alluded to the reputation which Chicago had as a "Windy City," and said that without question that was a desirable quality, as the winds which blew so fiercely, now east now north, blew all the meanness of its citizens out over the lake to be swallowed up in oblivion. He said that the Chicago Board of Trade was often harshly criticized, but that its government and methods of doing business always shone out most favorably when compared with methods of other organizations or businesses not so bound to a straight commercial conduct. He said he was a member of both the Illinois and the National associations and would be glad to see the latter receive the support of the former body.

C. C. Miles responded to the toast "Peoria." Mr. Miles said that it was not fair to be called upon to speak, as he had been, only an hour before the dinner was to be given. He said he had two reasons for not speaking, and his case was very much similar to the gentleman who refused to join his friends in a drink, stating that he had two good reasons for not doing so. On being asked those reasons he replied that one was that he had promised his wife that he wouldn't take a drink just before coming downtown, and his other was, that he had just had two drinks and didn't care for any more at present. Mr. Miles said that his reasons for not speaking were that he couldn't speak because he had such a bad cold, and if he didn't have a bad cold he couldn't speak anyway. In spite of his declaration that he was unable to speak on such short notice, Mr. Miles nevertheless did full justice to Peoria, and expressed the hope that all the grain dealers present and throughout the state would come to the city in June at the time of holding the annual meeting of the state association.

This completed the program of speeches for the evening, but in response to popular call Mr. S. S. Tanner of Minier made a short address.

Mr. Stanbery moved that a committee be appointed to draft suitable resolutions over the death of Mrs. William Van Tassell, and that they be forwarded to the surviving members of the family. The motion carried.

The meeting adjourned to convene in January.

Those present were as follows: A. V. S. Lloyd, Bloomington; C. J. Claudon, Fairbury; Geo. W. Hubbard, Mt. Pulaski; E. Roberts, F. W. Arnold, J. C. Luke, C. C. Miles, L. H. Murray, A. G. Tyng, Jr., Peoria; George Moschel, Washburn; P. A. Felter, Eureka; Abel Brooks, Bloomington; W. E. Johnson, Arrowsmith; H. G. Dodds, Morton; J. C.

Garman Jr., Toledo, Ohio; J. A. Ellis, Deer Creek; C. H. Wagner, Washington; W. G. Sudwig, Secor; Oscar C. White, Chicago; V. L. Anderson, La Rose; T. J. McGuire, Eureka; William Moschel, B. F. Tucker, Morton; A. W. Skinner, Hudson; W. H. Axtater, Chicago; F. N. Rood, La Rose; Frank Supple, Bloomington; H. H. Newell, Chicago; Henry Hasenwinkle, Bloomington; H. I. Baldwin, C. A. Burks, Decatur; C. H. Feltman, Peoria; J. W. Radford, Chicago; D. D. Hall, Peoria; Sam Finney, Chicago; Samuel Mosiman, Morton; J. C. Miles, Peoria; F. H. Churchill, Chenoa; F. B. Kennedy, William Walback, Peoria; Jacob Schrepfer, Metamora; Burt W. Marx, Chicago; C. C. Herman, Secor; E. S. Summers, Cappa; Louis Mueller, L. L. Gruss, Peoria; E. V. Graves, Duncan; S. S. Tanner, Minier; E. T. McFadden, Havana; M. L. Houser, Peoria; S. S. Hoyt, Chicago; Henry Stanbery, Chicago; H. N. Jackson, Bardolf; S. C. Bartlett, F. Ridge; B. E. Miles, Peoria; E. M. Combs, Capt. I. P. Rumsey, Chicago; F. S. Larison, El Paso; S. W. Strong, Pontiac; M. F. Dunlap, O'Fallon, Mo.; A. G. Tyng, Jr., Peoria; George Beyer, Depue; E. N. Wayne, Delavan; John E. Bacon, Chicago.

[For the "American Elevator and Grain Trade."]

NEW CORN AT TOLEDO.

BY HARRY W. KRESS.

The corn crop this year is, no doubt, a bumper in yield, but as to quality there is room for improvement. Owing to the stringency in the car situation, especially of Eastern cars, Toledo is getting a goodly portion of corn, a part of which was intended, no doubt, for the seaboard. It is surprising what desperate chances shippers will take to get their corn to market, loading any old kind of cars that they can lay their hands on, and using refrigerator cars with as little hesitancy as though they were intended for grain. It may be well enough to load corn into refrigerator cars when the condition of the grain will bear it, but new corn, no matter how good, is a very dangerous proposition under such severe tests. Every time the inspector gets into a refrigerator car I am prepared to hear the worst. "Nothing risked, nothing gained," is a bad motto for a shipper to put in practice on new corn; and the less he has of that kind of "mottoish" enthusiasm the better off he will be financially.

In loading new corn in cars last year it appeared as though I went to extremes. I made galvanized pipes 5½ feet in length, 6 inches in diameter, and perforated as much as possible with one-fourth-inch holes. I put four to five of these in every car, nailing them tight to the floor and allowing the top to be exposed above the grain line. With a current of air passing underneath the roof of the car, especially while in transit, these pipes acted as ventilators. I want to say that my apparent extremes were certainly rewarded when I received my returns; and if I ship any corn which I am in doubt about, I shall always go to those extremes. These pipes cost me about \$4 per car, and was no consideration when I took into account what it saved me on my corn. It is a good plan to leave the outside door open several inches to let in a small circulation of air. I want to say that at the rate some shippers are losing money on corn coming in here they could afford to have heavy one-fourth-inch screened grain doors instead of wooden ones and put twenty pipes to a car and have a profit of about \$50 instead of \$100 loss.

There seems to be a good deal of damp corn in some localities which is grading no grade, or N. E. G. The corn from Ohio and Indiana points is much inferior in quality to the Western corn, which, no doubt, is due to the fact that the Western states are raising a small kernel corn, which prevents its taking on very much moisture. A good comparison as to size would be comparing a berry of wheat to a berry of rye. The sooner Ohio and Indiana farmers learn that they will have to follow the example of their Western brethren (and they must eventually do so), the sooner will they realize that consumers of corn will refuse to pay them as

much for the kind of corn they are raising to-day. The fact that the Western corn is a smaller grain does not diminish its value; in fact, I am told it is the reverse. The percentage of moisture in No. 2 corn is 10 to 15 per cent; in No. 3, 15 to 20 per cent; in No. 4, 20 to 25 per cent, and in No. Grade, 25 to 30 per cent. Most of the off-grade corn here is kiln-dried, the cost of drying being 5 cents per bushel.

It is surprising to notice how little care is taken in cleaning the corn before sending it to market. A good thing for some shippers to do would be to have someone teach them how to regulate a sheller. They are not satisfied to merely shell the corn from the cob, but they must set the burrs so close that they crush corn, cob and all, and then attempt to blow and clean it very hard. When loading out they would find it in the dust house instead of the car. This makes it very apparent why corn comes to market in such trashy condition.

In figuring the average loss in money to the shipper whose corn grades no grade, I have estimated it between \$70 and \$90, and on No. 4 about \$20 to \$40 per car. In speaking to a friend of mine the other day, we got on the subject of new corn, and he told me of a shipper that, on his first shipments of new corn, has lost over \$1,000; so, rather than continue losing money at that rate, he took his sheller apart and told the farmers he would be unable to handle any more corn until he got a new sheller. It would not be a bad idea for some other shippers to follow his example at the rate they are losing money on no grade corn. Toledo is not as lenient on the grading of corn as it might be, but then I suppose their trade requires a higher standard.

A MINNESOTA ROW.

The row between the merchants at the village of Lowry and the Atlantic and Osborne-McMillan Elevator Companies has precipitated a new situation in Minnesota of some moment to line elevator companies. Some time ago the Lowry business men, believing the complaints of farmers that the local grain buyers were not paying proper prices, joined the farmers in the erection and operation of a co-operative elevator in the town. Then the elevator companies retaliated first by threats to establish a general store in Lowry and sell goods at cost if the farmers' elevator was not abandoned. The farmers' elevator continued to do business, however, and on October 1 a new and well-stocked general store, known as the Elevator Store, was opened and goods were sold at cost. The Lowry merchants assert that the Elevator Store threatened to ruin their business and they appealed to the attorney-general of Minnesota for relief.

Thereupon that official proceeded to bring suit (papers filed on November 24) against the offending companies under the state anti-trust law of 1899. The suit seeks to secure the forfeiture of the charter of the Atlantic Elevator Company, a Minnesota corporation, and to prohibit the Osborne-McMillan Elevator Company, a Wisconsin corporation, from doing business in Minnesota.

The petitioners allege that Lowry, their grain market for 1904, was controlled by the Atlantic and the Osborne-McMillan elevators, and that the prices maintained were so low that a large volume of business was diverted to surrounding towns. Merchants of Lowry and farmers in the vicinity organized what is known as the Lowry Farmers' Elevator Association and opened an elevator on September 1 of this year. Better prices were maintained by this elevator, and the Lowry market was considerably improved. The petition asks that the Atlantic and Osborne-McMillan elevator companies be enjoined from continuing the store at Lowry on the ground that it is not authorized by the articles of incorporation of the elevator companies; and, furthermore, that it is intended to interfere with or destroy free and open competition in the wheat market at Lowry, which is a direct violation of the state anti-trust law.

[For the "American Elevator and Grain Trade."]

**PUBLIC EXCHANGE TOPICS—
RATE REFORM PROBLEM.**

BY L. C. BREED.

In every large city there is a board of trade, either incorporated or an association, and while the name varies, the general purposes are practically the same. Also the methods of conducting these organizations differ, more or less, and must necessarily be adapted to the varying circumstances. In almost all cases there is considerable complaint of a want of interest on the part of a large number of the members, which is mainly indicated by non-attendance. From a somewhat careful consideration of the subject, the writer is inclined to believe that this, in part, is caused by the methods employed by some exchanges; and while there is much that might properly be claimed for any one of these methods, and it even might be admitted that in large exchanges it is, on most matters, the best way, still there could be and should be exceptions made to this plan.

The writer refers to the assumption on the part of the directors of certain large exchanges of not only what might, in common parlance, be termed "running" the exchange, but of assuming the responsibility of committing the exchange, as a body, to their personal views on public matters. It might be allowed that some attempt, more or less thorough, had previously been made to ascertain the views of some of their fellow members, but in case of an exchange* of over 1,800 members it is a matter of the purest assumption to pretend to know what stand a majority even of such an exchange would take on public questions. By public questions, it is not intended to imply purely political ones, though it is sometimes true that matters of an economic character become political in an attempt to secure the end sought for.

A better method is that of holding a public meeting on the floor of the exchange, preferably just before the close of the session, of which every member shall be notified through the mails, a week or ten days in advance, and the subject for discussion and upon which action is to be taken named. In this way, through the vote then had, no mistake is possible, no feeling engendered on the lines above indicated, and a greater moral influence exerted on the public, if there was a large attendance and a decisive expression of the members given. Incidentally (and this is an important feature), greater interest is awakened on the part of the members through such attendance and participation in the functions of the body with which they are connected.

ARBITRATION ON PUBLIC EXCHANGES.

Provision for the adjustment claims, as between one member and another, by arbitration is usually made in the by-laws of public exchanges in the various trades. In case of some exchanges, members are required, under the rules, to submit their differences for settlement by the committee appointed for this service. The object of this is to prevent lawsuits in the courts. It is doubtful, however, if a member of an exchange where this custom prevails refused to comply with the sale and was expelled in consequence, he could be prevented from reinstatement, if he appealed to the courts for an injunction, or that, in case a member refused to abide by the award of the committee and was expelled, that the courts would sustain either the action of directors in disciplining the member or recognize the findings of the committee, except as testimony offered by the plaintiff to the action in support of his contention.

The desire to minimize action in courts on civil cases, on the part of its members, is commendable in any exchange, and it is likely, if a limit was set, confining compulsory arbitration to cases where the amount involved was less than, say, \$500, very little opposition would be offered to the adoption of this rule by exchanges where it has not been operative.

*Merchants' Exchange of St. Louis.

If, however, the amount involved exceeds the sum mentioned, it would often happen, notwithstanding both parties to the action might be willing to submit the dispute to the arbitration committee of the exchange of which they were members, that it might not be possible for one of the contestants to stand as good a chance to win his case before the committee as he would in the public courts. The reasons for this view that occur to the writer are as follows:

1. In case of a large exchange, where many of the members were engaged in the grain trade, an arbitration committee might be made up of three receivers and two shippers. If a case involving the establishing of a new precedent came before them, it would hardly be reasonable to expect unbiased action.

2. If receivers decide against a shipper, might not a receiver fear a loss of business as a result, at least from the party to the action passed upon?

3. The average business man is poorly posted on the common law and the statutes of even his own state. The courts, however, assume that both parties to a suit know the laws and, in making the contract on which action is brought, were aware of the liabilities involved and of the remedy afforded by the courts for its enforcement.

4. Arbitration by business men is too apt to be decided merely on equity, irrespective of the legal rights involved.

5. Attempts are always made to apply the rule that more or less covers the case (if any have been adopted), but cases are sometimes decided on a too arbitrary construction which would not be allowed, in a public court, to govern the case.

6. In case of decisions involving speculative trades—in determining grade or quality deliverable on contract, for instance—an arbitrator's personal commitments, or interests, might cause a bias of opinion.

7. A thorough investigation of a complicated case is an unwarrantable tax on the time of business men constituting the arbitration committee, and a party might lose his case because his opponent had purposely exhausted both their time and patience, not leaving sufficient opportunity for dealing with the other side.

A COMPROMISE PROPOSITION ON RATE LEGISLATION.

The main difference of opinion between the two conventions that held meetings at Chicago to consider the rate legislation question was whether power should be given the Interstate Commerce Commission to fix a maximum rate and make the same operative at once. As it is, of course, desirable that the shippers as a body should, if possible, agree as to the terms of the proposed legislation, it may be that the opposing parties could get together by adopting the plan outlined below.

As a compromise proposition, agree to ask Congress to empower the Interstate Commerce Commission to fix a maximum rate (after full investigation and hearings, in which both the shippers and railroads were represented), and if the railroad or railroads affected gave notice that they would contest the decision, allow the old rate to be effective until the courts had passed on it. If the decision of the Commerce Commission is sustained, then each shipper should file his claim for the excess freight charged and paid, accompanying the usual papers with a statement referring the railroad company to both the Commerce Commission's and the court's decisions, which claims, if found correct and valid, should under the law be at once paid, and no recourse to court proceedings be required of the shipper to obtain judgment or to enforce payment.

It would seem that such a plan could not be regarded as unfair to either shipper or railroad company. On the other hand, if the courts sustain the contention of the railroad company that the rate was, all things considered, a proper one, shareholders will not, in the meantime, be deprived of the earnings which the court rules the company in which they are interested has a right to receive.

SUGGESTIONS TO SHIPPERS.

In his bulletin of November 28 Secretary Wells of the Iowa Association offers the following suggestions to grain shippers that are worth circulation in territory not reached by his official mailing list:

"Grain that is cool when loaded and becomes heated in transit suffers large shrinkage because of the evaporation of the moisture content by the heat. Large shortages must, therefore, be expected on grain arriving in a heated condition.

"The normal moisture content of corn (not cob) that is fully matured and dry is about 14 per cent, but at present the grain contains probably from 16 to 22 per cent of moisture. There have been no early killing frosts this season, and the stalks have been forcing moisture into the ears continually, even after the corn was matured in growth; so that ear corn put into crib is sure to suffer large shrinkage, varying anywhere from 15 to 30 per cent if held until next spring. While 75 per cent of the ear corn may shell out 56 pounds now, it may not do so in the spring.

"If you are selling grain 'Omaha inspection' and 'destination weights,' it would be well to have a thorough understanding about transferring cars and avoid any possible chance for [shrinkage] in the transfer. Why not insist on Omaha or Council Bluffs weights instead of destination weights?

"When shipping to St. Louis or East St. Louis, always instruct your commission merchant to get Merchants' Exchange weights and accept no other. It is necessary to give such instructions in case of each and every shipment so that there will be no misunderstanding.

"When billing grain that is liable to get out of condition in transit, use the special bill of lading provided by most railroad companies for rush shipments."

CHLORIDE OF CALCIUM.

The article that appeared recently in these columns, calling attention to the virtues of chloride of calcium for making a brine, or non-freezing cooling water, for use in gas engine jackets and in fire barrels, has been the subject of many questions addressed to the dealers, Messrs. James H. Rhodes & Co., Chicago, named in the article referred to.

One of these questions was whether the calcium chloride liquid evaporates and must be replaced, and how often; and if the water does so evaporate, what will be the effect on the calcium chloride and how often will more be required to replace that which is lost, if any.

Now calcium chloride absolutely does not evaporate nor wear out. Heat and cold have no effect on it; and if the water should evaporate out of the solution, all that is necessary is to add more water, at the same time testing the solution to be sure that it is not made too weak when new water is added. It is tested by the use of a salometer which registers the degrees of density. By referring to the table that appeared in these columns in the October number, on page 200, the degrees it should test on the salometer are shown.

Nor does calcium chloride have to be renewed unless the tank should spring a leak and the liquid run away and be lost in that way. When once bought and put to use it is permanent and will last the entire winter. As previously stated, it is a great absorbent of moisture, and should some of the water of the solution evaporate the calcium will absorb moisture out of the air; therefore the evaporation is very slight under ordinary circumstances.

Calcium chloride has no smell and no scum will form on the top of the solution.

Destruction of the tank or the engine by corrosion is feared by many who have had experience with salt for making an anti-freezing solution; but tests of chloride of calcium show it has no corrosive effect whatever. This can be demon-

strated by anyone by making up 4-ounce bottles of solutions of both salt and calcium and putting a piece of threaded pipe in each bottle. In two days' time the salt brine will be filled with rust, while the calcium solution will be perfectly clear.

The use of calcium chloride in fire barrels has been thoroughly investigated by all insurance companies recently and it both has their approval and they are now recommending it to all their clients. It does away with the danger of the hoops of the barrels bursting, has a lower freezing point than salt brine and makes a much better fire extinguisher.

Mr. Arnold, in the November number of this paper, on page 246, refers to the use of the calcium chloride solution for filling stationary fire extinguishers, a solution made of "five pounds of calcium to each gallon of water, with a constant air pressure, being ready for instant use even in a temperature of 40 degrees below zero," —72 degrees of frost—while the acid machines are of no use at all in winter unless removed to a warmer place than a grain elevator is at that season, and more to the same effect.

Furthermore, being antiseptic, the calcium remains odorless indefinitely and keeps away bugs from around the water barrels, where frequently they are numerous, as in the case of flour mills, etc.

Indeed, the consumption of calcium chloride is increasing very rapidly, now that its merits are becoming better known, not the least of which is its extreme cheapness, the cost of calcium solution for all elevator purposes being but little more than nominal and entirely disproportionate to its practical value.

SWITCHING CHARGES AT DETROIT.

The matter of switching charges at Detroit will have to be passed upon by the state courts, Commissioner Prouty having ruled that the Commerce Commission has no jurisdiction. It appeared from testimony taken before the Commission at Detroit that the Grand Trunk imposes switching and elevator charges on some consignees where it does not on others, nor where other roads in Detroit do not make the charge. The history of this particular imposition was told by Jas. T. Shaw, of J. S. Lapham & Co., substantially as follows:

When the Detroit Railroad Elevator Company built what is known as the D. & M. Elevator, on land owned by the Detroit & Milwaukee Railroad, the road leased the land for a long term of years. At that time there was no other elevator, and as the D. & M. Elevator elevated all the grain, one-half a cent a bushel was charged on every bushel of grain brought into Detroit by the D. & M. Railroad. When the D. & M. was acquired by the Grand Trunk, the transfer was made subject, of course, to the elevator agreement with the Detroit Railroad Elevator Company. Since that time a number of private elevators have sprung up and the D. & M. Elevator no longer elevates all the grain. It is alleged, however, that the Grand Trunk still charges the half cent. The Grand Trunk switches free to some elevators while it collects switching charges from others; yet the Michigan Central will place a car of grain on the inspection track and after it is inspected will switch that car to any point on its own tracks free of extra charge.

An example of the hardship to Detroit grain handlers as a result of the Grand Trunk charges is cited where a man has a private elevator on the Michigan Central belt line. He gets a car over the Grand Trunk, which, besides charging for the unperformed elevation service, charges \$3 a car to switch the car to the Michigan Central. The Michigan Central, not having received any pay from that car, charges \$3 for switching the car to the private elevator, so that that car of grain costs that consignee, besides the freight, from \$12 to \$13 more than it would if it had been sent in over the Michigan Central originally, as the Michigan Central makes no charge for sending a car to its destination from the inspection track—if that destination is on its own line.

It is stated that the Board of Trade has pro-

tested to the Grand Trunk in vain, and hence the appeal to the Interstate Commerce Commission. Commissioner Prouty held that as the freight in the case complained of originated and ended its journey in the state of Michigan, it did not come within the jurisdiction of the Commerce Commission, but was a case for the state courts to dispose of.

[For the "American Elevator and Grain Trade."]

UNIFORM GRADES.

BY HARRY W. KRESS.

I think that every shipper in the country should advocate uniform grades just as he is now advocating rate regulation. If the different markets were to get together and allow some of their pride to wane a bit, we would mighty soon know that uniform grades to all ends and needs could not only be made applicable but very popular. Some receivers make the excuse that "local conditions," etc., would prevent uniform grades, but I think the trouble lies in that some markets are selfish, that some others have too much politics, and some too much doping and mixing. The very fact that one market will not sell to another market unless the market buying agrees to accept of the market selling its certificate on grades and weights as final, the rule being the same in both markets, makes it appear that they distrust one another to a certain extent.

Now, if a shipper were an expert judge of grain and were to ask a terminal market to accept his inspection and weights as final, they would think him a fit subject for an asylum. In looking over the rules governing inspection at Toledo, Baltimore, Philadelphia, New Orleans, Cincinnati, Milwaukee, Chicago, Minneapolis and others, I found a difference on very nearly all the corresponding grades; and that is the reason I say a shipper should post himself on the grades in the market he favors with his grain.

But consider his predicament when he sells on a track bid and has not the faintest idea what market terms he is up against. It is foolish to ask the shipper to buy and handle his grain to suit the fancy of a half-dozen different markets. I received a letter the other day from a large shipper who wanted to know why No. 3 white oats at Toledo graded N. E. G. at Philadelphia? There are a whole lot of things a shipper might ask, but, then, if he does, he is considered a kicker, fanatic or crank. If Toledo has a high standard grade on No. 2 rye, due, we will say, to "local conditions," and if Chicago's No. 2 be only equal to Toledo's No. 3, which to Chicago's trade is satisfactory, I see no reason for that being a hindrance to uniform grades. We certainly can establish grades for something that exists, but not that which does not.

I say, establish uniform grades in all the markets on stuff graded in, and if a market wants to establish an out grade, let the market do that on its own responsibility. At the rate the Grain Dealers' National Association is recovering its prestige, with a lift from every shipper, we should soon have enough steam behind our arguments to force a reasonable consideration from the large terminal markets on uniform grades.

I might imagine a condition where a five-dollar gold piece would be worth \$5 at New York, \$4 at St. Louis and \$3 at New Orleans, or vice versa. The shippers are practically up against the same thing on grain, but they must grin and bear it. It is not for lack of brains that we haven't uniform grades; we have lots of them in every market. If there be a high standard established, for example on No. 2 Yellow corn that exists, even though there be very little of it, let there be a rule to that effect in every market and the demand and price will determine its destination; and the same will apply to all other uniform grades. There is no doubt in my mind that a great deal of time and care is taken by the leading markets to have their own trading rules as nearly just as possible. Then why all this great difference in corresponding grades?

[For the "American Elevator and Grain Trade."] ELEVATOR HEAD CONSTRUCTION.

BY OBSERVER.

The construction of the elevator head and legs has improved somewhat of late years; yet it does seem as though this part of an elevator had received too little thought, considering its importance. In fact, the same might be said of the entire elevator. Can anyone think of any other business, where profits are in the fractions and depend so much upon handling products quickly and cheaply, with as large aggregate values as there are in elevators, that shows as little improvement in plan with reference to reducing expenses, fire hazard and lack of what might be called modern improvements as applied to other kinds of business? And this is entirely due to the fact that there has not been much concentrated thought along this line. There is no reason why grain cannot be handled on as improved methods, if one is willing to put the money into it, as is coal or dirt. Everybody knows the wonderful improvements in machinery and methods of handling these last-named materials.

All over the grain-growing country the territory of each individual house has been so cut up by new branches of railroads, by new stations started, with business narrowed, that the business of the country house will not always warrant the latest improvements. These must be confined to the large terminal houses, the only places where grain in large quantities is still handled.

Some of the monstrosities in elevator construction are actually an insult to the phrase "mechanical construction" and are painful to the eye to behold. It is no wonder there are continual breakdowns and expensive delays which send grain to a competitor and cause worry, annoyance, vexation and many fires to wipe out the prospective profits. The last few years have shown great improvements. But the oldest style of buildings are still standing and must be used. They occupy as valuable sites, from the point of view of business location, as do the modern buildings. They are expensive to operate. They require more help and more repairs.

To mark the difference, therefore, between the old and the newer ideas, we will give in the following paragraphs some ideas, probably old, but nevertheless of a kind in need of repeating and emphasizing, on the construction of the elevator, including boot, leg and head. This last covers one of the most important parts of a building, where defects in construction and drawbacks above mentioned are most concentrated.

I would put the boot pit low enough in the ground to get a good fall from the dump. This, of course, with reference to the height of the floor above the ground. It should be as low as possible, however, to make a nearly level drive. A farmer may go to another elevator because it is an easier pull for his team. I would advise a driveway fourteen feet wide in order to accommodate a four-horse team abreast.

Every boot should be on cement bottom or in a steel tank on a solid foundation. Rats must be kept out of this part of the basement, so it is better to make the entire basement rat-proof by cementing it complete. Rats will undermine the whole space surrounding the boot unless it is protected and make endless trouble and cause no little loss of grain. The boot will become unstable and it is impossible to keep it properly cleaned without this inexpensive and important start.

The boot pulley is not necessary to be as large as the one in the head, so the legs must gradually spread as they ascend. This spread should all be made before the legs rise above the first floor; then made straight from there up. The belt in back leg, of course, sags. It does not run taut like the front leg which carries the load.

To guide the belt and keep it from rubbing on the leg, a roller running in iron boxes should be placed in the back leg at the point where the leg goes straight up. Let the legs be three or four inches wider than the belt and also give plenty of room so that the cups will not strike the front of the leg. If the belt runs to either side a little, then there will be no fear of wear and friction.

If the elevator is to handle ear corn it will be economical to have 16-inch cups. If in a location where no ear corn is handled, the cups should be at least 10-inch. A little surplus capacity you will some day be glad to have, as is almost invariably the case with an engine. A few extra horsepower more than you immediately need may save time and the expense of replacing the engine with a larger one later.

The elevator head must have an iron pulley inside, for several reasons. The most important is that the danger of fire is lessened. Many fires have been traced to wood pulleys in elevator heads, caused by friction in several ways. Insurance companies are authority on this question. They pay the losses and investigate the causes. Their experience covers thousands of cases. No man with any breadth of mind will think of placing his little narrow knowledge of his own elevator against that of companies operating all over the country for years past. Yet many minds are not open to scientific reasoning. A choke-up which stops the belt with the pulley still revolving may soon cut the belt in two and is liable to set it on fire in the process. The dust particles in the enclosed head will be ignited and an explosion, with the resulting spread of flames, is the natural result.

The wood pulley will at times become loose on the shaft and cause friction. This will be caused by long spells of dry weather. The wood surrounding the shaft will shrink and cause great annoyance in addition to the danger. Then a third danger is from the pulley striking the side of the hood. None of these conditions will lead to a fire with an iron pulley, but with a wooden one the danger is great.

An argument often used is that the head pulley revolves so slowly that nothing can heat. That may be true of the shaft; but look at the rims of a 36-inch pulley. It gets around the circle in the same time as does the rim of a 2-inch shaft. The fallacy of such an argument is evident. The speed certainly is sufficient to be of consequence. If you want to test the heat produced by wood rubbing against wood, take two sticks and rub them back and forth over each other rapidly and under some pressure. I do not say that every wood pulley will cause a fire, but it has done so. The only object of mutual fire insurance companies' declining to take insurance on plants with the wood pulley is their unceasing effort to improve the physical condition of the elevator risks and thereby reduce the insurance cost, to place all who insure with them on a parity. Otherwise they have no interest in this requirement.

There are two proper ways to place the bearings of head pulleys. One is to attach them to the sides of the head. They have no connection with the cupola. Thus the elevator stands entirely free from the building and cannot get out of plumb as the building settles. Bearings of this kind should be provided with an adjustable screw and set in a slot. The stretch of the belt can then be readily taken up. If bearings are on timbers attached to the cupola, which rests on the cribbing, the legs should be built to telescope with the settling of the building. A space, say 12 inches, is cut out of each leg. This is enclosed by a separate piece surrounding the leg. This will let the upper part of the legs and head settle down and remain plumb, or nearly so, when the cribbing goes down by drying out or when heavily loaded.

It is very important that the construction be

such that there is easy access to the inside of the head. It seems that the best method is to have the top of hood so constructed that it can be entirely removed and not nailed or screwed down.

With the turn-head on the first floor there is altogether too much neglect in the care of the cupola. The absolute necessity of going to the top to adjust the spout is a thing of the past. The result is that this part of the building is not seen very often; dust piles up and stays there, as does some of all kinds of grain handled, and they are all mixed together. Bearings get dry, pulleys and belts get out of true. Especially is this liable to be true when the only access is a narrow dark stairway or ladder, where one unused to the place will get several knocks on the head from crossbeams. A passenger elevator is the obvious correction of these conditions. No work then to run up and down a dozen times a day. It may be the means of saving the elevator from a fire. In fact, we know of buildings where elevators have done such service. If there is a fast line shaft and cleaner in the cupola, all the more necessary is this passenger elevator. A little advice from elevator builders would result in having them put in in nearly all new buildings and in old ones when remodeled. Many contractors are well posted on what is desirable and necessary in elevator construction. Many others seem to have little practical knowledge. To the former must be given a good deal of credit for recent improved elevator construction. The grain man often does not know the fine points and things are left to the builder to complete. All too often he does so in a hurry and with the least cost to himself. Any way to get his pay and get away is good enough.

We know of one builder who works upon the principle that his reputation is to be built upon the solid foundation of good work and earnest effort. He makes a study of the requirements in each individual case and applies all the knowledge drawn from his experience to fit the conditions. The field and opportunity to build up a paying business along these lines is certainly open; and why should not a good reputation as a successful builder be as potent and valuable an asset in this as in any business, including the grain commission business? As all grain men know, some markets have a reputation for this kind of dealing, and others have the opposite; and those with the good reputation profit greatly over the markets where the country shipper has been fleeced—or even if he thinks that he has—on weights and grades.

From this digression let us return to the head construction. The discharge spout from the head should be dropped lower than is usually the case. This is to prevent grain being carried over and down the back leg. The spout should start below the bottom of head pulley. In order to get good distribution the cupola must be higher and the head raised, too, but not within a foot of the peak. If the leg stands free from the elevator and is built to the top of the building, when settling has taken place you will find the roof spread at the peak.

In making the connection of spout to the head with those from bins, all depends upon the style of construction of the legs. If the elevator is built free from the building, then the floor of the cupola will settle away from the end of the spout, while the cribbing is drying out for a year or so after it is built. If built with telescope legs the connection can be made tight and it will stay so. It is an important feature, in caring for dust and grain, to have the joints tight and see that they do not change. There is a turn-head built which makes an absolutely tight joint. If this is not used—and it is the best construction we know of—it will be worth while to connect a small suction fan with each head. This will remove a good deal of chaff and large part of the

dust that would otherwise land on the floor and accumulate on timber.

It is hardly necessary to add a word regarding the strut-board of head. The preponderance of experience seems to indicate that the best construction is to have it slant at an angle of 45 degrees or more to the down leg, and let it be placed so that it does not come within at least a foot of the head pulley at the nearest point. If nearer than that, the currents of air form an eddy where dust will settle and pile up until in time the space will be filled up. The strut-board must be clean at all times, so that whatever lodges upon it will immediately run off. When dust becomes old and is confined a chemical change takes place. There is a generation of heat, gas is given off, and so spontaneous combustion follows. Result: Elevator burned. "Cause, unknown."

[From a Bulletin by Geo. A. Wells.]

SCALES: CAUSES OF IMPERFECT WEIGHTS.

In a bulletin, date November 10, to the members of the Iowa Grain Dealers' Association, Secretary George A. Wells summarizes, from reports by the Association's scale experts, the following:

Causes for imperfect weighing conditions that require expert services to remove, adjust or repair:

Bearing feet on wrong; bearings worn out of seal; connection loops resting on levers; counter-weights out of seal; frame rotten and corner bolts pulling through.

Levers not hanging plumb, out of level, connected up wrong, pulling on connections, binding on beam rod, pulling on beam rod, binding against foundation.

Pivot broken or resting on edge of loop.

Nose-irons out of adjustment or loose.

Poise out of seal or overloaded with shot.

Beam notches worn off.

The following causes for imperfect weighing conditions should be detected and removed by the operator without the aid of expert:

Beam-rods binding against floor; check-rods missing; dirt in box under hopper scale interfering with levers; dump-chains binding against frame; eyebolt resting on extension lever; foundation undermined by rats; frame rotting; hopper binding against spout, or resting on spout; levers covered with dirt or hanging in a twist; nail wedged in between frame and opening; platform binding against frame, or resting on coping, or platform bolt resting on frame, or resting on corner irons, or binding on dump brace, or platform-plank resting on dump timbers; poise filled with dirt; piece of wood wedged in between lever and corner-stone; truss-rod on timbers loose.

Mr. Wells concludes with the following pertinent suggestions:

Foundations should always be built on either concrete or stone.

Frames should be made of steel when exposed to weather.

Pit should be deep and well drained.

Levers should be placed at top, not at bottom, of pit, so that water, snow or dirt will not readily interfere.

Do not buy scales having cast-iron bearings, but with steel bearings that may be repaired.

If your scale frame is rotting, get the timbers for a new wood frame, or a new steel frame, on hand, so that when the scale inspector comes along he can put in the new frame and reset the scale and leave it in perfect weighing condition, thus saving the expense of an extra trip.

Have your scales inspected at least once a year.

More than 50,000 bushels of wheat damaged by snow in the Palouse country and supposed by the farmers to have been hopelessly ruined, were sold recently at 40 to 55 cents a bushel.

The Frisco System grain train and lecture party have been at work in Oklahoma for a month, and have attracted much attention from the farmers. The dates for the remainder of December, as announced, are as follows: Mountain Park and Roosevelt, on December 16; Hobart, December 18; Cordell, December 19; Bessie, December 20; Clinton, December 20; Arapahoe, December 21; Custer City, December 22; Thomas, December 23.

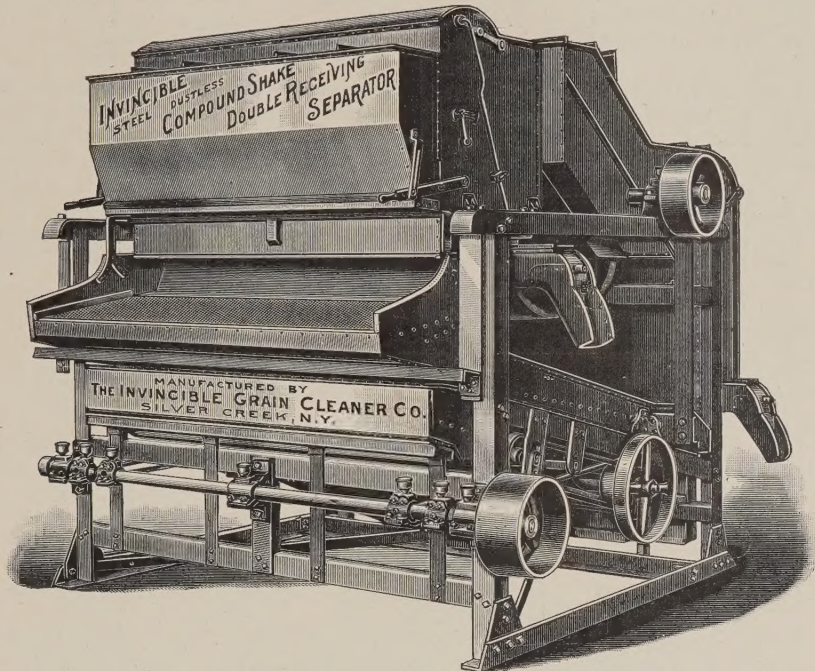
[For the "American Elevator and Grain Trade."]
**OBJECTIONS TO THE PROPOSED
 NEW CHICAGO RULES.**

BY SOMERS, JONES & CO.

We are not opposed to a number of the minor changes in the grading of grain, as proposed by Chief Inspector Cowen's new draft of rules, as they conform, as it appears to us, to the customs of the

and yet the "rejected" grade was necessary, because the trade required a grade for lightweight, trashy stuff, or screenings, which, being in good condition, were fit for warehousing. As a whole, it strikes us that the trade needs at least two grades to cover malting barley, and as No. 1 and No. 2 are practically obsolete, it makes it necessary to fall back on No. 3 and No. 4 to cover the grounds.

We also believe that kiln-dried corn, properly



INVINCIBLE STEEL COMPOUND SHAKE DOUBLE RECEIVING SEPARATOR.

trade as they exist at present, but we do oppose the adoption of the proposed new grades of yellow oats for the following reasons:

First—Because we consider the proportion of yellow oats raised in the territory tributary to Chicago entirely too small to make it necessary.

Second—Because even that proportion is bound to be reduced shortly, as country elevator men are agitating the question with the farmers of the substitution of white oats seed, and this will result inevitably in a further decrease in the area raising yellow oats.

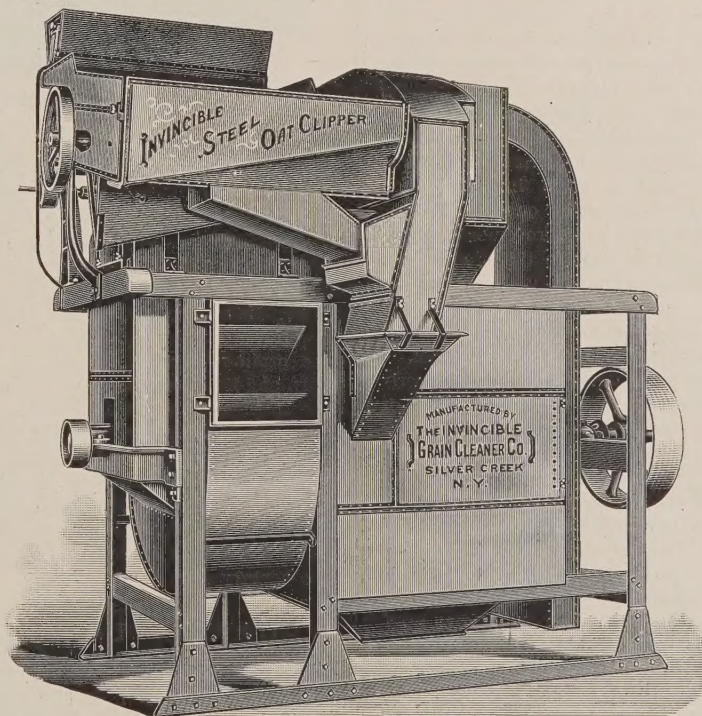
Third—Because it is pandering to a very small proportion of the trade, the track bidders, as against the regular commission business of Chicago. The grain business as a whole is no doubt being fostered more largely by the large number of commission merchants depending on consignments than by the comparatively few track bidders, and it will undoubtedly benefit Chicago and the grain trade generally more to give the commission end of the business thorough consideration.

While we object to these proposed grades of yellow oats, we are with the chief inspector on the proposition that sulphured, bleached or chemically treated oats should not be graded at all.

We are also opposed to the omission of the grade of "4 barley," as it would leave only one malting grade (that of No. 3), there being so little No. 2 in the average crop of barley as to count practically for nothing. To leave only one grade of malting barley seems to us the height of absurdity.

The grade of "feed barley," covering, as it does, barley testing 40 pounds, and barley that may be slightly musty, or with a strong ground smell, cannot, of course, be included in the malting grades, and it makes it essential, it seems to us, that there should be a grade between No. 3 and "feed barley." It was well understood, at the time the recent change in the grading of barley was made, when the "feed barley" and "rejected barley" grades were adopted, that there might be an occasional car of fair malting barley in the "rejected" grade, when it happened to be stuff that was very dirty and under 40-pound weight. At the same time, it would be impossible to put this into No. 3 grade,

dried, should be allowed to grade No. 2 (2 yellow and 2 white), and trust that the present rules in that respect will not be changed. There are other very good arguments in favor of permitting kiln-dried corn to grade No. 2. We will not go into details on these, as, after all, we consider the fact that they are a safeguard against manipulation as



INVINCIBLE STEEL OAT CLIPPER.

the chief reason why a grade should be given on good corn, properly dried.

We find we cannot work the through billing on Clover Leaf, so corn shipped on that road must be sold basis local rate, etc. On damp soft corn it's also impossible to sell on through billing.—Zahm & Co., Toledo, Ohio, November 18.

**INVINCIBLE STEEL CONSTRUCTION
 SEPARATORS.**

The Invincible Grain Cleaner Company of Silver Creek, N. Y., has received an order for a number of special size steel separators from the Liverpool Grain Elevator and Storage Company of Liverpool, England. The order is claimed to be especially noteworthy as being the first one ever placed in this country for steel machines for use in England.

The Invincible steel machines are well known at home and are the natural outcome of the demand for fireproof construction in grain elevator buildings. The company makes both the receiving separator and oat clipper of iron and steel and has equipped several elevators with machines constructed in this manner.

Our illustrations show the Invincible Steel Dustless Compound Shake Double Receiving Separator and the Invincible Steel Oat Clipper. The former is built regularly in five sizes and operates on the same principle as the wood machine which the company has been building for a number of years. It is equipped with the Invincible Automatic Shaking Feed, which distributes the grain evenly over the wide shoe. This shoe is made in two parts, which counterbalance each other, each part having separate eccentrics or pitmans. While one-half of the shoe is moving in one direction the other is moving in the opposite direction. The result is a smooth-running machine, with no vibration to the machine or building. Each machine is fitted with two fans and has the automatic traveling brush underneath the cockle screen.

The Invincible Steel Oat Clipper has all the features that have made the standard machine so successful. It is fitted with a patented device, which admits air to the cylinder, giving the machine a perfect ventilation and removing all impurities the instant they are loosened from the oats. The grain is at all times under the control of the operator, and he can easily and quickly adjust the beaters to suit his purpose. The separators are regulated by valves so that few or many light oats can be removed. These machines are furnished

with the automatic feed, a device for supplying with perfect regularity the stock to the machine. Under the cockle screen, when necessary to remove seeds, the manufacturers place an automatic traveling brush.

Machinery cannot do its work properly if it is not looked after. Keep it clean.—McCotter.

[For the "American Elevator and Grain Trade."]

DEFINITE RULES FOR GRADING GRAIN.

BY CARL S. SCOFIELD,

Of the United States Department of Agriculture.

The indefiniteness of rules for grades of grain in general use in the larger grain markets of the United States has been a subject for much discussion and adverse criticism during recent years. A relatively small number of those interested in grain trade matters has been contending for a long time that much of the dissatisfaction which exists in local trade circles and in our export business in grain is due to this indefiniteness as to rules for grades.

When the first rules for grades were promulgated, the business of grain dealing was on a much smaller and less differentiated scale than it is at present, and there is no reason for believing but that the first rules gave very good satisfaction. As the custom of grading grain spread over the country and as specialization in the grain business proceeded, it became evident, however, that there were shortcomings in these first rules that gave rise to misunderstandings and dissatisfaction. From time to time slight changes have been made in the grade rules used in the various large markets, but there has never been any radical change in these rules, with the exception of the rules for grading flax, which were altogether remodeled by the Chicago Board of Trade in 1900. These rules for flax were based upon definite measurements and have been highly satisfactory since their first use.

It has been frequently suggested that it would be not only possible but highly desirable to put the rules for the grades of the staple cereals on a somewhat similar basis. Theoretically, the commercial grading of grain can be done with the highest degree of accuracy. Enough is known of the qualities and defects common to these grains to make it possible to measure the qualities and defects in any given sample so closely as to give a very accurate idea of the actual commercial value of the whole quantity of grain the sample represents. If this were done in every case, there would be no occasion for dealing in grain by sample, and much, if not all, of the dissatisfaction which now exists with regard to grain grading would be done away with. Such accurate grading, however, requires considerable time and considerable equipment, and from the standpoint of the practical grain dealer or grain inspector such methods appear quite out of the question. There are, however, a few practical improvements which, it would seem, could be made to the present system of grain grading that would not seriously disturb existing trade customs and trade relations and which might, at the same time, open the way for the material improvement of the present system.

The grain trade is naturally and very properly conservative. Any tampering with grade rules or with methods of grain grading is pregnant with possibilities of much harm. If, however, a considerable proportion of grain dealers regard the existing type of rules and the existing methods of grain grading as unsatisfactory, it would seem to be a fairly easy matter to do some experimenting with these rules and methods that would in no way disturb the equanimity of existing conditions and which might very easily open the way to practical improvements which would be of great value. The present cost of grain inspection is inconsiderable as compared with the values of the commodities graded. If it could be shown that accurate grain inspection and accurate rules for grades actually paid, in the long run, there would, of course, be no hesitation about the adoption of these accurate methods. A majority of the men in the grain business need to be shown that this is the case before they will entertain any suggestion of a radical change of any kind.

It would seem to be perfectly feasible to undertake in a small and inexpensive way in such a market as Chicago, for instance, some experiments to

demonstrate the possibilities and practical limitations of accurate methods of grain grading without seriously disturbing the ordinary methods which are now followed. The office of grain inspection in Chicago might, for instance, undertake to grade samples of grain on the so-called percentage basis for anyone desiring to have that work done, and that office could make a charge almost sufficient to cover the expense of the work. It would be a relatively inexpensive undertaking to employ a laboratory man who had sufficient knowledge of laboratory methods to make moisture determinations and to operate fairly sensitive balances for determining the percentages of the various undesirable ingredients of samples of grain. The operation of such a laboratory in connection with the grain inspection office at Chicago, where there are employed a number of men who are thoroughly familiar with all phases of the practical problems of grading grain, would certainly be a great benefit, not only in determining the actual practicability of more accurate grading methods and grade rules,

United States government. The actual sentence was six months' imprisonment in the jail of Iron County, Missouri, and a fine of \$2,500, with the statutory penalty of forfeiture added.

Unless the verdict and sentence are reversed, on Senator Burton's appeal to the Supreme Court, his seat in the upper body of the national Congress will at once become vacant, the term for which he was elected expiring on March 4, 1907.

C. R. ADEN.

The man who has a good location and a well-equipped elevator is doubly prepared for emergencies. So closely related are both these factors of success, one might almost hesitate to say which is the more important. Location is not paramount; but when one remembers the narrow margins on which grain must now be handled, the factor of equipment becomes vital.

The house illustrated herewith, that of C. R. Aden at Carlinville, Ill., is not a large one. Be-



ELEVATOR OF C. R. ADEN AT CARLINVILLE, ILL.

but also in educating the younger inspectors and helpers of the office in the fundamental principles of the work. If there exists any considerable dissatisfaction with existing grain grading methods, this dissatisfaction would quickly find expression in supporting such a laboratory as the one suggested, since the dissatisfied persons would doubtless use this laboratory freely in demonstrating their grievances.

The grain market of Chicago is forging ahead rapidly, and it is becoming the leading grain market in the U. S. The first grain grading that was done in the United States was done for the Chicago market, and it would seem highly appropriate that this market should lead the way in discovering new methods of perfecting the business of grain inspection and grading, as it was the first to inaugurate the idea of grain inspection, something like half a century ago.

BURTON FOUND GUILTY.

Senator Burton, on November 25, was found guilty on all six counts in the indictment upon which he was on trial in the United States Circuit Court, charging him with having violated a Federal statute by having agreed to accept and having accepted compensation from the Rialto Grain & Securities Company of St. Louis to appear for the company in the capacity of an attorney before the Postoffice Department.

The penalty involved two years' imprisonment in the penitentiary and \$10,000 fine on each count and a forfeiture forever of the right to hold any position of honor, trust or profit under the

ing 60 feet long and 24 feet wide by 55 feet high, its capacity is only 20,000 bushels, but its machinery equipment includes a 32-horsepower Foos Gas Engine, No. 2 Western Sheller and No. 2 Western Cleaner, with elevators and spouting to enable the operator to load a 60,000-pound car in about 30 minutes.

There is, therefore, a minimum of expense in such a house; and Mr. Aden has pride enough in its good work to keep it in first-class condition.

COMMERCE COMMISSION'S IDEAS.

On November 29 the draft of a railroad rate regulating bill which embodies the administration's recommendations was submitted to the interstate commerce committee of the Senate by the Interstate Commerce Commission, the bill having been prepared by the Commission at the request of the committee to reduce to concrete form the legislation necessary, in the opinion of the Commission, to correct abuses now prevailing in the country's transportation system.

The salient features of the bill, as stated in the Associated Press telegram, are the provisions giving the Commission the following powers:

To fix a maximum rate, to fix a differential, and to prescribe both a maximum and minimum rate.

To enforce the same when that may be necessary to prevent discriminations.

To change the classification of any article.

To have the decision of the Commission take effect within thirty days.

To make the word "transportation" include all instrumentalities employed by the carrier, includ-

ing elevators, terminals and cars, whether owned by the carrier or other parties.

To require the publication of total charges in case private cars are used.

To exercise control over merchandise hauled in part through a foreign country.

To examine accounts of interstate railroads, and prescribe the books of account to be kept by railroads.

To fix joint rates.

To permit an appeal to a United States Circuit Court, when an order of the Commission may be suspended sixty days from the date of its service on the carriers.

To prohibit the issuance of an injunction by the court except when, in its opinion, the order is unlawful.

[For the "American Elevator and Grain Trade."]

A POINT FOR SHIPPERS OF KILN-DRIED CORN.

BY JOHN D. SHANAHAN,
Chief Grain Inspector at Buffalo, N. Y.

One of the signs of the progress of the times is the putting on the market and the installing thereof in country elevators of grain driers especially designed for the interior trade. I am glad to see this, and it will no doubt be the means of saving a lot of money and trouble for country shippers of new corn. But there is an element of danger for those who do not understand the proper use of such driers and the nature of soft shelled corn, against which I wish to sound a warning.

The thorough drying artificially of new corn entails an enormous loss in weight, and to save some of this loss the drier only extracts enough moisture from the corn to leave the same in what he considers safe shipping condition. This would do perfectly well if the corn, after such drying, were perfectly cooled before loading into cars; but in most cases that have come under my observation this is not done, although it may appear to have been done.

In the drying process the corn gets very hot all through, and in the cooling process the outside of the corn is apt to be cool while the inside still carries enough heat, which does not appear on the surface, to start a car of corn heating after it leaves the shipping point. I find it difficult to make shippers believe that such corn gets musty and out of condition, and even hot; but I want to tell them that partially kiln-dried corn, that is not thoroughly cooled after the process, is more dangerous for shipping than it was in its natural state before drying.

Such corn, being sold as kiln-dried corn, is rapidly creating a sentiment against kiln-dried corn when there really should be one greatly in its favor, and is no doubt one of the reasons why it is proposed in Chicago to grade kiln-dried corn no better than 3. Shippers should either dry their corn thoroughly or cool it thoroughly after partial drying.

WAR ON THE COAST.

State Grain Commissioner W. H. Reed of Washington has declared war on the Washington State Millers' Association. He says that one of the by-laws of that Association is this:

The Portland committee and the Puget Sound committee shall consult, each day, early in the morning, through their representatives, and agree on limits, which shall be sent out by the various members at the same time, and expire each evening at 8 o'clock.

There you have a trust; and although the attorney-general of Washington can find no law to punish "trusts" in that state, Mr. Reed is going to smash things just the same. He has been traveling through eastern Washington collecting evidence against the alleged "combine," which he submitted to the attorney-general. Whereupon that functionary assured Mr. Reed that the "combine" might be proceeded against under the

Federal statutes relating to trusts, in so far as the trade is interstate as between Oregon and Washington, or under the common law, in a suit by an individual on a contract entered into with any individual member of the "trust," such contract being void. The attorney-general, while not, however, very enthusiastic on the subject, recommends to Mr. Reed to try the Federal grand jury.

JOHN BEGGS PASSES AWAY.

It is not given to every grain man to reach the allotted life term of threescore years and ten. Perhaps there is too much work, too much drive or too much worry that often undermines the health of those who live the strenuous life of them that do the marketing of the products of our wonderfully fertile Western fields. Here and there, however, we find men who live actively, yet wisely, and in this class must be placed John Beggs, who



THE LATE JOHN BEGGS.

passed away at Bloomington, Ill., on November 12 at the age of 69 years.

Mr. Beggs was born at Oshawa, Ont., on November 10, 1836, and his first location in the United States was at Dubuque, Iowa. Later he moved to McGregor, Iowa. At each of these points he engaged in the grain and milling business. He left McGregor for Chicago, where he was connected with Elmendorf, Watte & Co. until they went out of business. Since 1893 he conducted his affairs through the firm of W. F. Johnson & Co. of Chicago.

Mr. Beggs was naturally a man of retiring disposition, but made many friends in the Middle West and enjoyed to a high degree the respect of his associates on the Chicago Board of Trade.

Death came to him without warning, while stopping at Bloomington. He had retired apparently in his usual health, but died in his sleep from heart failure. His remains were taken to his old home in Canada for burial.

He had no children and his wife died a number of years ago. He leaves a brother in Boston, one in Pennsylvania and a sister in Ontario.

During the week of November 26, Duluth elevators loaded 9,000,000 bushels of wheat for Buffalo, much of the grain remaining on board during the winter.

The Internal Revenue Department says that Illinois (mainly in the Peoria-Pekin district) used in the fiscal year 1904-1905, 29,927,325 bushels of grain (corn mainly) in the manufacture of spirits, the production of which averaged 4.47 gallons of spirits per bushel. In the same year and industry 18,387,650 gallons of molasses were used, producing 12,086,327 gallons of spirits.

[For the "American Elevator and Grain Trade."]

NOTICE REQUIRED TO BE GIVEN BUYERS OF GRAIN.

BY J. L. ROSENBERGER,
A Member of the Chicago Bar.

Two contracts were made whereby certain parties agreed to ship 15,000 quarters of No. 2 corn from any Atlantic or Gulf ports, at seller's option, to the other parties to the contract at Liverpool, by first-class steamer. Each contract contained the provision: "The sellers shall furnish to buyers steamer's name and quantity loaded within five days of the date of bill of lading."

The cargo was shipped at New Orleans on the 24th of the month, and on the 27th the shippers wrote the buyers at New York, giving an account of the shipment and inclosing the bill of lading, and stating that they had drawn on them at sight for the amount due thereon. This letter did not arrive within the five days from the date of the bill of lading, and upon receiving notice of the arrival of the draft, the buyers wired the shippers, declining to accept the cargo.

The buyers had ordered the cargo for the purpose of selling in Liverpool, and it was necessary for them to know the name of the steamer and the amount of the cargo so that they could give notice to their agent, or purchaser, in Liverpool a sufficient time in advance so that he could be ready to receive and take care of the cargo. It was, therefore, apparent, the Court of Appeals of New York says (Steinhardt vs. Bingham, 75 Northeastern Reporter, 403), that the time of the giving of the notice of the shipment was of the essence of the contract, and that this provision should have been complied with by the shippers as a condition precedent to their right to demand of the buyers an acceptance of the cargo.

Was the letter mailed on the 27th at New Orleans a compliance with the provision of the contract? It was mailed within five days of the issuing of the bill of lading, but it did not arrive in New York until after the expiration of the five days. Had it arrived in New York and been received by the buyers within five days, it would doubtless have been a sufficient notice.

As has been seen, the contract was silent as to the character of the notice that should be given. The general rule of law is that where any statute or the terms of any contract requires notice to be given, and there is nothing in the context of the statute or the contract to show that any other notice was intended, a personal or actual notice must be given. But when it is apparent from the context of the statute or contract, or the circumstances surrounding the case were such as to show that a personal notice was not intended, a notice by mail may be given.

Continuing, the court says that by referring to the contract it was to be seen that the shipments might be made at the option of the shippers from any Atlantic or Gulf ports. They might, therefore, be made from Boston, New York or other nearby ports. They were required to be made by first-class steamers. The notice must be given to the buyers in New York within five days after shipment. The steamer might then be five days on its way to Liverpool. The buyers were then required to give timely notice to their consignees at Liverpool, so that they might be prepared to receive and care for the corn on its arrival. If the shippers might wait until the expiration of the five days and then give the notice by mail, which might postpone the actual notice to the buyers for two or three days longer, they might be unable to give the notice required by their consignees and themselves be placed in default upon the contract by reasons of such delay.

The court, therefore, thinks that under the circumstances of this case, actual notice within five days was contemplated by the parties to the contract, and that therefore a nonsuit on the action brought by the shippers to recover damages for the refusal of the buyers to accept the corn shipped to them was properly granted by the trial court.

COMMUNICATED

[We invite correspondence from everyone in any way interested in the grain trade on all topics connected therewith. We wish to see a general exchange of opinion on all subjects which pertain to the interest of the trade at large, or any branch of it.]

OPPOSES ABOLITION.

Editor American Elevator and Grain Trade:—We think that the monthly report should not be abolished.

Yours very truly,
THE MORRAL LUMBER & ELEVATOR CO.
Morril, Ohio.

VERY MUCH PLEASED.

Editor American Elevator and Grain Trade:—Please send to the above firm the "American Elevator and Grain Trade" for one year. Find enclosed check for \$1 in payment for same. Were very much pleased with sample copy (Nov. 15) which was sent to B. S. Snyder last month.

Yours truly,
WESTERN GRAIN & FUEL COMPANY,
Anamoose, N. D. By B. S. Snyder.

GIVE KILN-DRIED CORN A CHANCE.

Editor American Elevator and Grain Trade:—Regarding the proposed changes in the inspection rules, beg to say that we do not think it good policy to drive the kiln-dried corn from the No. 2 grade. Think if the corn is properly dried and in a proper condition to grade under the rules it should grade No. 2 whether it has been kiln-dried or not.

Yours truly,
ARMOUR GRAIN COMPANY,
Chicago. Per G. E. Marcy.

SHOULD NOT CUT OUT CROP REPORT.

Editor American Elevator and Grain Trade:—The suggestion of cutting out the monthly report of the Department of Agriculture, we would consider a very great mistake. This report has in the past been of immense value to the grain trade, particularly that part of the trade who have not at their command facilities for securing the same information through private channels.

Yours truly,
B. A. LOCKWOOD GRAIN CO.
Des Moines, Iowa.

CROWELL LUMBER AND GRAIN COMPANY.

Editor American Elevator and Grain Trade:—The elevator we are erecting at Omaha is a transfer house for the handling of the grain bought by us at country stations, and will be operated in the name of the Crowell Lumber & Grain Company. The house is now under construction and will be completed early in January. The Barnett & Record Company of Minneapolis are the contractors, and while the storage capacity of the elevator will not be very large, we think it will be very up-to-date.

Yours truly,
CROWELL LUMBER & GRAIN COMPANY.
Omaha, Neb. C. C. Crowell, Vice-Pres.

KILN-DRIED CORN SOLD AT A PREMIUM.

Editor American Elevator and Grain Trade:—I am positively in favor of accepting on contract grades corn that has been properly kiln dried. For instance, take good No. 3 corn that has just missed the grade of No. 2 corn owing to its percentage of moisture. Such corn, placed in the hands of experienced men to be dried, if properly handled, is, in my judgment, equal to any naturally dried corn. But if you take "no grade" or poor No. 4 corn, it would be impossible to make contract grade out of it. Such corn is simply baked, or parched, to such an extent that it falls apart in handling.

Thousands of cars of kiln-dried corn are sold throughout New England each year at a premium, and on certain crops and at certain periods of the

year, European buyers will pay fancy prices for kiln-dried corn, a fact that can be vouched for by any exporter. In fact, we have just installed a large drier at this port.

Yours truly,
Boston, Mass. SETH CATLIN.

KILN-DRIED CORN SHOULD BE DISCOUNTED.

Editor American Elevator and Grain Trade:—Regarding the inspection of grain here in Chicago, and the proposed changes of rules, in oats we do not think there should be any change, and in regard to kiln-dried corn, would say that it is hardly fair to the speculators that the rules should permit kiln-dried corn to be applied on contract grade at the same price, although it may be fully as good as the other. The proper thing would be to discount it, say a couple of cents or something like that.

The proposed grades in barley we believe would be a good thing and should be established.

Yours truly, W. A. FRASER CO.,
Chicago. Per R. W. Carder.

CONTINUE, BUT IMPROVE, THE CROP REPORT.

Editor American Elevator and Grain Trade:—I certainly am opposed to discontinuing the monthly reports of the Agricultural Department. They may not be accurate, but they certainly are of some value to the producers of the country. I think everything should be done that can be to make them more accurate and to see that they are kept secret until promulgated by the proper authorities.

Taking the grain business as an example, I believe the exact condition of the crops could be more accurate if made up by representative grain shippers than by farmers or special agents.

Very truly yours,
Winchester, Ind. P. E. GOODRICH.

KILN-DRIED CORN SHOULD GRADE AS 2.

Editor American Elevator and Grain Trade:—We do not believe it would be beneficial to the general trade to have kiln-dried corn eliminated from No. 2 grade. If it were dried to be equal to No. 2, we think it should grade as No. 2.

There seems to be a clique in Chicago who want to get as little stuff to go in contract as possible, so as to enable them to manipulate the grades to their own personal advantage, thereby raising corners and fleecing the public generally.

As far as we are concerned, as shippers using Chicago mostly as a hedging market, we favor a more lenient grading of corn than has been the rule in Chicago in the past. East St. Louis has been much less rigid and is supposed to be under the same jurisdiction.

Yours truly,
Springfield, Ill. E. R. ULRICH & SONS.

HAS FAITH IN THE CROP REPORT.

Editor American Elevator and Grain Trade:—We should regret very much to see the government cut out the monthly crop report of the Department of Agriculture. While it is expected that at times the government report may not be very accurate, nevertheless we think it is far preferable to have this report than to dispense with it and depend entirely upon private information or the reports from bear or bull houses, which certainly would be less reliable than the governing report. After all, we do not think the reports have ever been far from the mark. On the contrary, we believe they have been nearer correct on the average than all others.

Yours truly,
New Orleans. A. F. LEONHARDT & CO.

ON THE SHRINKAGE OF GRAIN.

Editor American Elevator and Grain Trade:—We beg to inquire what, in your opinion, would be the shrinkage in a car of wheat containing 1,020 bushels, grading "New A Rejected Red Winter Wheat," and stored in wooden bins in a public elevator for a period of 80 days?

Again we would ask, what in your opinion would be the shrinkage in a car of wheat con-

taining 1,044 bushels, grading "New Steamer 2 Red Winter Wheat," under the same conditions as above, the only difference being that this car remained but 70 days?

Yours very truly, M. J. GOEHL,
Supt. Twenty-third St. Stores.

Philadelphia.

ANSWER.—On referring your inquiries to several experienced and practical elevator men, we find that all interviewed on the subject are united on the point that the amount of shrinkage on either lot of wheat would depend upon the condition of the grain at the time when it was received into the elevator. If the grain contained considerable moisture the shrinkage would, of course, be much more than would be the case if the wheat had gone through the sweat and was well dried out.

A gentleman who handles the warehouse accounts in the office of a large grain concern is of the opinion that the shrinkage on either lot of grain would run one-quarter of 1 per cent.

The superintendent of the elevator of one of the largest concerns figures the shrinkage on the lot of 1,020 bushels of "New A Rejected Red Winter Wheat" as 2 bushels and 35 pounds and on the lot of 1,044 bushels of "New Steamer 2 Red Winter Wheat" as 1 bushel and 20 pounds. He added that if the condition of the wheat were such as to necessitate handling it several times during the storage period, the loss would probably be much greater than noted in his figures.

If weevil had a chance to do any damage the weight would be reduced materially.

We have records of experiments to determine shrinkage where the wheat was weighed from time to time during the period of storage. Sometimes there would be a gain in weight, while at other times there would be a loss. Wheat absorbs moisture very readily, and where there is a large percentage of humidity in the atmosphere it is more than likely there would be an increase in the weight than a loss.

In the thirteenth biennial report of the Kansas State Board of Agriculture, part 4, page 531, we note the following: "Professor Brewer several years ago reported for the government the atmospheric influences on wheat from the time it left the thrasher to the time it went into the hold of the vessel. This report shows the condensation on the grain, as it runs ice cold from an elevator on a warm day on the lake or ocean coast, to be several per cent. The increase in weight of a carload of new wheat from the ranch in California to the port in San Francisco was enough more than to pay the freight."

And also: "If grain be abnormally dry when it is thrashed, and be held until spring without any loss from rats, etc., there will be little or no loss of weight. There may be a gain."—EDITOR.

HOW PLUGGED HAY CARS FARE IN PITTSBURG.

Editor American Elevator and Grain Trade:—

In reply to your recent inquiry, delayed on account of my illness, regarding plugged cars of hay, I beg to state that such cars are not as prevalent as they used to be, as shippers have come to learn that they usually plug the cars to their own detriment. At least this is true when the receiver has not honored too heavy a draft against the shipment, when the shipper is of the unscrupulous kind.

You ask what method we pursue when we receive such cars. We can only answer that the cars have to be handled as the occasion at the time warrants. Very often when a car arrives at the buyer's siding and turns out to be other than what he purchased, the buyer does not want to take the hay at any price, because it is not the kind of hay his trade demands. This, of course, puts the seller face to face with a very unpleasant proposition. To move the car elsewhere will necessitate a switching charge on the part of the railroad company, and this is usually based on a tonnage rate and may run from \$5 to \$10,

according to the distance the car is to be moved. The buyer, not wishing to handle the grade contained in the car, is not willing to accept it at a strict market difference prevailing at the time between the two grades, but insists on a much heavier reduction; and in this he cannot be blamed, for the reason stated before, that it is not the grade of goods that his trade requires. This puts the seller face to face with the duty of choosing the lesser of two evils, if it can truthfully be called such, of selling the car where it will net the most money.

When the car is left at the original buyer's siding, at a reduction more than ordinary surface conditions should warrant, the shipper vents his wrath on the seller at this end for not having secured him what the market at the time was quoted to him. And should the seller dispose of the car elsewhere, at the market price prevailing at that time, and charge the shipper up with the cost of moving the car, he is then accused of not knowing his business and disposing of the cars very loosely.

I might state that this firm does not care to trade with shippers who are such fault finders; and I might also add here that most of the shippers we have at the present time, when they have a car that runs different from what the floor shows, describe the contents of the car to us in a letter; and in that case our salesmen know exactly what to do and how to dispose of the car to the best advantage without incurring the expense of having the car moved elsewhere after the car arrives at the buyer's siding.

Speaking of plugged cars of grain, I might state that my experience as an elevator man shows that they are very few and far between.

Very truly yours,

J. A. ALBERT GEIDEL,

Pittsburg, Pa. Of D. G. Stewart & Geidel.

KANSAS CAR SERVICE LAW.

Secretary Smiley of the Kansas Grain Dealers' Association has obtained an opinion from Carr W. Taylor, attorney for the Kansas Board of Railroad Commissioners, the following opinion on the constitutionality of Chap. 345, Laws of Kansas, 1896, that will explain itself:

Replying to your favor of the 22d November, asking for an opinion as to whether or not Chap. 345, Laws of Kansas, 1905, is unconstitutional, in so far as it applies to the furnishing of cars to Kansas shippers for the shipment of produce to points out of the state, I have to say, after a careful investigation, that said law is not unconstitutional and not in conflict with any section of the constitution of the United States, for the reason that it does not relate to interstate commerce or to the fixing of any interstate rate, but is limited solely to the proper equipment and service of railroads within the state of Kansas to shippers within the state.

A Texas statute, embracing a penalty on railroads for not furnishing cars within six days after notice, one-fourth of the freight being tendered, was held valid in the case of a shipment to a point outside the state. (Houston & Texas Central R. R. Co. vs. Mayse, Tex. Court of Appeals, 83 S. W. Rep. 53.)

In the case of the Atlantic Coast Line R. R. Co. vs. Commonwealth (Ga.), 46 S. E. Rep. 910, the rules prescribed by the new Virginia constitution with reference to storage, demurrage, car service and car detention charges were held to be not void as regulations incidentally affecting interstate commerce. "The law is constitutional and valid." (Ry. Co. vs. Dwyer, 75 Tex. 572, 2 S. W. 1001.)

The principle involved in laws of this character, which do not go to the extent of fixing or affecting interstate rates, has been sustained in the following cases: Chicago, Milwaukee & St. Paul Ry. Co. vs. Solon, 169 U. S. 133; Richmond & A. R. Co. vs. Patterson Tobacco Co., 169 U. S. 311; M. K. & T. Ry. Co. vs. McCann, 174 U. S. 580; Western Union Tel. Co. vs. Call Pub. Co., 181 U. S. 92.

Sec. 4 of this act gives the applicant for cars, when he has made a proper application and deposit with the railway company for same, as provided in Sec. 5 of said act, has a right of action against the railway company so furnishing said cars for the sum of one dollar per day for each car failed to be so furnished, to be recovered in any court of competent jurisdiction, and all actual damages that such applicant may sustain.

The action is a personal one, to be invoked by

the applicant, and the act contains no clause making it the duty of the Board of Railroad Commissioners, or the attorney for the Board, to enforce same.

Mr. Smiley's circular letter to his membership adds: "Several of our members have written me that the agents for the company have refused to accept 25 per cent of the freight charges. In such cases make the offer in cash, not by check, and in the presence of one or more witnesses, being particular to have the witness make note of date such tender was made. It is an established fact that most of the shortage on cars at this time can be accounted for, as the railroad companies have moved their equipment into Southern states that have reciprocal demurrage laws that have been held constitutional by the state courts."

[For the "American Elevator and Grain Trade."]

TOLEDO AS A GRAIN RECEIVING MARKET.

BY HARRY W. KRESS.

Toledo should be one of the largest terminal markets for grain. It is located at a point favorable both to the East and the West, with Indiana and Michigan at close range. It has railroad lines reaching into the heart of the Western grain-producing states. In fact, the railroad facilities are advantageous in that it is a short haul which does away with exorbitant freight rates and involves less shrinkage. The shippers can receive quick returns, which is very acceptable, so that their capital is quickly returned, making it unnecessary to borrow money at a high rate of interest from their banks. During the busy season this is very important. Shrinkage, capital and freight rates are three important factors to the shippers of grain.

Quick inspection is what a shipper desires. This is especially so on new corn. The railroad yards here are large, with ample elevator facilities to take care of almost a half million bushels of grain a day without crowding matters. Toledo has one of the finest harbors on the lake front. This makes a splendid water route to Canadian and Eastern points for six months out of the year. This should give Toledo the advantage of enabling her buyers to give shippers good bids.

Now why does not Toledo handle as many cars as she used to some years ago? First, the interior millers years ago were compelled to ship the grain they bought from the farmers to Toledo, owing to their not having sufficient storage capacity. To-day that is a thing of the past. The grain bought by the interior and mining districts is sold direct by the shippers instead of going to the terminal markets. There is not a terminal market in the country to-day that has not felt the effects of these reverse conditions. A shipper to-day will sell his wheat to his miller competitor, which he did not do years ago. We must also understand that a car to-day carries three to four times the amount of grain in comparison with a few years ago. The surprising feature is that the inspection and weighing charges have not increased in proportion. The receipts of grain in 500 cars ten years ago can to-day be carried in 100 cars. This certainly shows that we are advancing with the times.

Toledo might have been loose in her methods years ago (at least one hears she was), but if the receivers erred in the past they certainly are making good now, and I hope she will reap a bountiful prosperity for her efforts.

As I will soon complete my study here, after seeing a little more of the new corn, this will be my last report on Toledo, and I am sorry that I will not be able to see conditions as they exist in other markets to make comparisons.

There are some things better unsaid than said, when abiding by policy. However that may be, I have been very careful to keep my notes, etc., on file, so that, should the occasion arise, I shall not be handicapped by not being able to produce the

unsaid. My aim has been to unfold to my fellow shippers that which I thought had the most bearing on my observations at the time.

THE DULUTH-SUPERIOR ROW.

The feature of the past thirty days of the grain inspection fight at Superior was the issuance of a temporary injunction on November 22 by the United States Court at Madison on complaint of the Barnum Grain Co. of Duluth. The complaint in the case states that the Wisconsin inspectors had been breaking into cars of grain consigned to Duluth since the Wisconsin grain inspection law went into effect, and that the company had been embarrassed and inconvenienced in a business way as a result. The injunction restrained the Wisconsin Commission from sending inspectors into the local yards for the purpose of inspecting or in any way meddling with grain consigned to the Barnum Company and billed through to Duluth. Grain consigned to the Barnum Company and billed only to Superior may be inspected as other grain. To insure the Commission against possible loss as a result of not being able to collect fees on the grain during the time of the existence of the injunctive order, the Barnum Company posted a bond of \$250 with the clerk of the Federal Court. Arguments on the motion to make the injunction permanent were set for hearing on December 12.

NEW ENGLAND GRAIN DEALERS.

The annual meeting of the New England Grain Dealers' Association was held in Boston on December 6. At the annual banquet the Association was addressed by Hon. Charles S. Hamlin, who took the ground that Boston's commercial future would be seriously endangered if specific and arbitrary railroad rates, based on mileage and cost to the common carrier, are adopted. In other words, the shipping of Boston, on account of the fact that Boston is farther from the grain centers than New York or Baltimore, must depend for its salvation on the system of differentials.

Referring to the recent decision of the Interstate Commerce Commission respecting differentials on export business, Mr. Hamlin said:

"The Commission finds in effect that Baltimore and Philadelphia are entitled to export from the interior of the United States as great a value of exports as does Boston, although the ocean tonnage of the port of Boston is almost double that of either Baltimore or Philadelphia, and the sea voyage is nearly two days shorter. The power to fix a specific rate, minimum as well as maximum, therefore, if carried out according to the principle laid down by the Commission, inevitably will cut Massachusetts off from the great center of the country in industrial exchanges. Boston will always be undersold by cities nearer the center of the country. Deprived of its advantage from location on the seacoast by customs tariffs, and at the same time with its railroads forbidden to alleviate its natural disadvantage of location on land, the future development of Massachusetts will undoubtedly be precarious."

A FREAK IN CORN.

A farmer took into Arcola, Ill., the other day a freak in the shape of an ear of corn having an uneven number of rows, that is to say, 23 rows. An uneven number of rows is so rare that many farmers and experts will say it is never seen; but it is said that this particular ear was well developed and the rows straight and regular in character.

The largest cargo of grain ever taken from Boston to Rotterdam was shipped on the steamer New Orleans of the Holland-Boston service, which sailed on November 29. The steamer carried 54,000 bushels of barley, 80,000 bushels of wheat, 80,000 bushels of oats, 26,000 bushels of corn and other cargo.

[Read to Grain Dealers at Salina, Kan.]

ARBITRATION VS. LITIGATION.

BY T. L. HOFFMAN, ENTERPRISE, KAN.

The principles of arbitration are based on the equitable adjustment of differences between parties, either real or imaginary. Arbitration evolves from and supersedes litigation as men are guided more by reason and the principles of justice rather than by prejudice and passion.

It is the instinct of self-preservation which prompts the lawyer to prolong your case. In so far as the study and administration of the law enables a man to become a keen student of human nature it is helpful to him; but the abuses growing out of modern administration of law is one of the curses of our time. Arbitration courts of justice have come as a herald of a juster, saner time, when men know that combination and co-operation are sure to win in the long run over competition and courts of law. The method of trial by jury has become, in practice, an accepted farce. Justice is the last principle to emerge as a practical, working, loving truth. It is higher than love because it involves unselfish consideration of principles and ethics as applied to others.

Let me make a statement upon which all of you will agree with me—excepting the lawyers. Litigation is most of the time bad for all parties concerned. Arbitration, although it must always make someone lose, is, we might say, in comparison with litigation, always good. Just a few reasons for the above statements.

In arbitration men meet each other on a friendly basis. Their cases are stated—in minor cases by themselves—and the judges who are competent decide. I said "judges who are competent." As a rule the judges before whom cases for arbitration are brought are the men who understand that particular line of business. For instance, it would be unwise to have a groceryman as a judge to decide whether the buyer of grain had the privilege to extend a contract or cancel it, because the groceryman knows nothing of the grain business. However, it would take but a second for any of us to decide that point, as it is in line with our business. The reason I bring out this point is because when you go into litigation you have twelve men who, as a rule, are not business men to decide your points. These twelve men are more or less biased, or are led to believe certain things that are not facts by the eloquence of the lawyers.

The most forcible argument I can bring for arbitration is the difference in cost of arbitration and litigation. Take a case where there are only a few hundred dollars involved. If you arbitrate, the cost to both parties concerned would not be over \$15 or \$20, but if you should go to law the cost to both parties would amount to at least \$100. You have two lawyers to pay, cost of stenographer's work and other costs of the case, which in a good many cases is more than the money involved.

I have a case for arbitration before the Association now. The amount involved is \$52.50. I had to put up \$10 to guarantee costs. If I had put the claim in my lawyer's hands, before everything was over I would probably get the 50 cents and the lawyer and court the \$52.

Arbitration is always the best means of settling controversies in large cases as well as small. Think of the misery, sorrow and unhappiness that could have been averted had the Russians and Japanese arbitrated. No, Russia was too proud, too big, to recognize Japan; and so there must be war. Thousands upon thousands of lives were lost, homes wrecked, people starved and misery that can never be told caused, because two nations refused to arbitrate. You know they at last decided to arbitrate, but too late. All the wealth of Manchuria, Korea, Russia and Japan are not worth the lives that were lost and can never remove the sorrow and unhappiness caused. How much more manly, humane and Christ-like it was for the envoys of these two countries to meet

each other and settle the questions involved; and how much more manly and brotherly it is for us to say we will leave it to our friends to decide instead of going into court and allow a jury who knows nothing of our business to decide.

The man who has a good case should never refuse to arbitrate, as he will win, and the man who has the poor case cannot refuse to arbitrate, because if he loses in court his costs are much larger. When we arbitrate we meet each other as men, and I don't believe we do in the court room. Let all of us profit by the experience of others, and when we have any differences, write Brother Smiley and arbitrate. I know all of us will have more money in the end and will be friends and feel as men ought to feel toward each other. As a competent judge as to the folly of going into court or any of its additions, I refer to our worthy secretary.

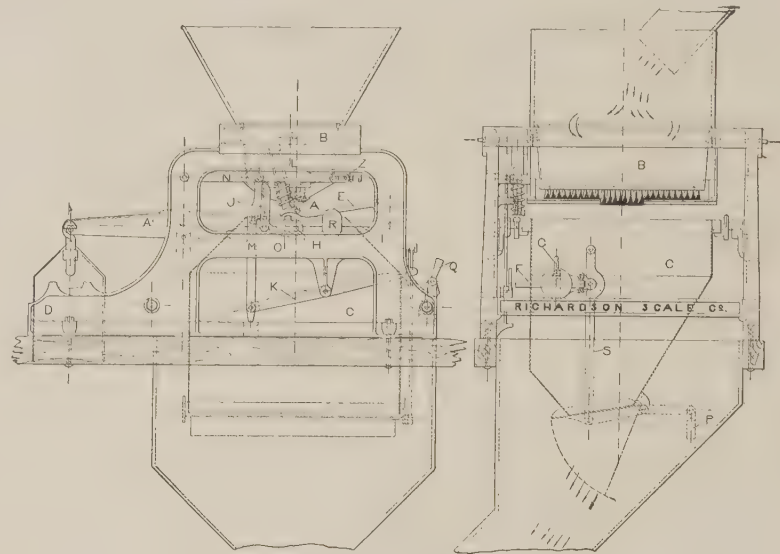
RICHARDSON AUTOMATIC SCALE.

The position of the automatic scale in the up-to-date and economically conducted mill is now becoming recognized, not only in the large mill where every effort has been exerted to secure

ing this entire period. It was first manufactured here about eighteen months ago, since which time several hundred machines have been placed among the mills and elevators of the East and West.

The illustration shows a drawing of this device. It is operated entirely by gravity, and its distinguishing feature is that it will balance like an ordinary beam scale, and the onlooker can see at any moment the accuracy of the weighings.

It will be seen that the scale has an equal armed beam A-1, which is supported on bearings on the frame of the machine in the center on knife edges, while suspended on one end is a hopper C, made to any required capacity, in which the material is weighed, and to the other the weight box D is hung, in which ordinary dead weights are placed for the required load. The empty hopper C and the empty weight box D are so arranged in weight that they exactly balance each other. The beam is, therefore, at this stage in a horizontal position and free to work and balance perfectly. The value of an automatic scale possessing the feature of a perfectly balancing beam, obtained automatically and without need to move or lift levers to reach this result,



THE RICHARDSON AUTOMATIC SCALE.

every improved device for handling grain and minimizing the cost of milling, but also in the small mill where hitherto an automatic scale has been regarded as unnecessary to economy of operation, and as an expensive ornament, usually reserved for the larger and more wealthy mill. To-day the small miller and grain elevator man is showing himself as eager as his more prominent competitor to adopt this labor-saving device, because he has discovered it enables him to at once ascertain precisely what his yield is, and to promptly locate any deficiencies in the mill, and this without labor or cost, save the initial outlay necessary for the purchase of the machine.

The requirements of an automatic scale are that it shall be accurate, simply constructed and durable. It is claimed for the Richardson Scale, which is here illustrated, that it will fill this description, and from the testimonials which its manufacturers have received from all parts of this country there would appear to be a consensus of opinion amongst millers and grain dealers that such claim is well founded.

The Richardson Automatic Scale has a long record of successful service abroad behind it. In European countries it is the standard medium of weighing of many harbor boards, and the dock companies of such prominent ports as London, Liverpool and Bristol, where millions of tons of grain are handled annually, have used the machine in great numbers for many years past.

The Richardson Scale was first known in this country some twelve years ago, and its users testify to its continuous and accurate weighing dur-

will at once be appreciated. The miller can see, without any effort on his part, that his machine balances at every weighing, and is absolutely satisfied that his returns are right.

The material is delivered to the scale by way of the chute B, and the supply is regulated by the swinging gate L. Weights for the capacity of the scale, or for any amount which it may be necessary to weigh, are placed in the box D, whereupon that end of the beam is depressed so that the other end is raised, and opens the supply gate L by means of the pendant spring A. The material, in a full stream, is now delivered to the weighing hopper C, and this continues unarrested until about two-thirds of the charge has been passed. The weight of this material, together with the weight of the supply gate L and the material carried by it, acting through the pendant A, now depresses the hopper end of the beam. The bar M, which is pivoted on the toggle line N, has a roller which now falls into position and rests on an arm of the trigger J and is supported by it.

The beam A-1 is now liberated from the weight of the supply gate L by the pin in the latter falling on the toggle linkage N, before referred to as being supported by the drop bar M resting on the trigger J, when a small dribble of grain or other material now enters the hopper, the gate being nearly closed. This small stream continues until the hopper has received the precise amount required, whereupon the beam assumes a horizontal position and, knocking aside the arm O of the trigger J, permits the drop bar M to fall.

The gate L is now closed, and the free end of the lever K rises and engages with the bolt F of the discharge mechanism, and thus throws the toggle S out of the perpendicular and allows the weight of material to open the door of the hopper C and discharge. The weighted end of the beam again descends and would force the supply gate L open were it not locked by the toggles N being in a straight line and continuing in this position until the scale has completely discharged, when the hopper door returns by means of the balance weight P. The illustration shows the scale in a position preparatory to its discharge, with the supply gate closed.

On the discharge of the load the hopper end of the beam is thrown upward, and it would appear that considerable jar and friction would be occasioned by the collision between the hopper and the pendant A, which, it might be suggested, would in time cause the machine to gradually knock itself to pieces and seriously impair the knife edges of the beam, rendering accuracy impossible. This rebound, however, is taken up by a specially prepared steel coil spring, while the scale is provided with special rubber springs which prevent the vibration usually present in automatic scales. The machine thus delivers its charge without any shock, and there is no rocking on the delicate knife edges.

The return of the hopper door brings the discharge toggle S into position where it forms a dead center, and the discharge door is securely locked. The action of the bolt F on the lever K has the effect of raising the drop bar M, which breaks the line of toggles N and allows the compression of the spring in the pendant A to open the supply gate L, and a fresh weighing is commenced. The pin in spring G holds the bar F in position so that it will engage with the lever K, as before explained. By this the bar F can also be turned in, thereby allowing the scale to weigh but not discharge.

This is useful when starting up the machine to make a test of the weighings, and to be satisfied that its adjustment is perfect. The catch Q is also used to prevent the machine from discharging, when such discharge is not convenient. This engages with lever K and prevents its striking the bolt F and so discharging the machine.

The scale is fitted with a mechanical counter which registers every weighing automatically, and which is so inclosed as to be dustproof, and can in no way be tampered with.

When there is any accumulation of grain or other material in the lower hopper or bin into which the scale may discharge, and it is not removed readily, the scale automatically stops. It will be seen that the material will hold the lip of the door open and so prevent the return action of the discharge mechanism upon the toggles controlling the supply gate; consequently no further weighing takes place until the obstruction is removed and the grain slides away from the discharge door, whereupon the scale, unassisted, resumes its functions. This is a valuable feature, since it is impossible for the lower hopper to overflow by the continuous discharge of the machine, and by this means the deliveries from the machine are regulated automatically by the speed at which the material is removed from the discharge door.

The rod E is to keep in place the pendant A, but may be drawn out to show a full movement of the beam when required. By the screw in the slotted lever Z the size and volume of the final dribble is regulated. If high speed from the scale is required, a large dribble must be arranged for by turning in the screw as far as possible, and so lengthening the dribble hole in the supply gate. If exceptional accuracy is required a smaller dribble is provided by letting out the screw.

It may be suggested that while the supply gate closes immediately the hopper C has received

the exact amount, there is always a certain volume of material in the act of falling at the moment of the cut-off which must be compensated for if accuracy is to be obtained. This volume is weighed or provided for by the adjustable weight R on the lever I which rests on the beam. This is adjusted according to the volume of the dribble, and causes the beam to cut off the supply when a quantity has been passed which equals the prearranged load, less the weight of material in the act of falling. It will thus be seen that such a final flow is not overweight, but just completes the charge, and that the scale absolutely balances, as before pointed out.

The Richardson Scale is made of the finest materials procurable, and it is guaranteed never to stop through any flaw in its mechanism or construction. The scale we illustrate is adapted for weighing grain and granular materials of any description. The type is largely used by shippers for weighing from farmers' wagons and to cars, and by millers for weighing into the mill and to rolls, etc. However, the Richardson scales are of various designs and are also used for bagging oats, corn, grits, hominy, cornmeal, cottonseed meal, chops and feeds of every description. They are provided with bagging hoppers and attachments necessary for bagging grain.

It is claimed that the Richardson Scale can weigh free running grain, such as corn, etc., at a rate of eight to ten weighings per minute, and six to seven is a normal speed on oats. The Richardson Receiving Scale has, we are told, been exceedingly successful. It may be fitted with a special additional beam patented for weighing the residue of a car, after it has been so far emptied that insufficient grain remains for the prearranged capacity of the scale. The residue is weighed in the same hopper on another beam, to which is suspended a dial registering the exact contents of the hopper. The latter process is automatic and autocratic in its correct operation.

The Richardson Scale is made in sizes ranging from five to twelve hundred pounds per weighing, and built to suit requirements. It is invariably guaranteed to weigh within one ounce per 100 pounds and the manufacturers have safeguarded themselves in this guarantee, since in general practice even finer results are obtained.

The Richardson Scale Company, whose offices are in the Park Row Building, New York, have built a model factory at Passaic, N. J., for the manufacture of this apparatus.

FEDERAL GRAIN INSPECTION.

A Washington telegram to the New York Commercial says that Senator McCumber of North Dakota will introduce his former bill, or a new bill, providing for federal inspection of grain moving in interstate commerce. It is, of course, remembered that Senator McCumber introduced such a bill three or four years ago, a bill so crude and exhibiting in its form and apparent purpose such hopeless ignorance of the real scope and meaning commercially of the system of grain inspection that it received but scant attention and was pigeonholed without ceremony. The senator now says that bill was offered for the purpose of discussion. The discussion was limited to a speech by the senator, prepared for home consumption, where it served its purpose. He says now that he is encouraged to revive the question by the receipt of a large number of letters and petitions endorsing the general proposition of federal inspection of grain. The complaints also of receivers abroad of American grain, as reported by our consuls, the senator believes justifies the creation of a system of federal inspection of export grain to restore confidence in American certificates of inspectors' grading of such grain.

Senator McCumber, in support of his position, cites the analogous system of inspection of export

meats which, he believes, has had a salutary effect on the export trade in packing house products; and he expresses the opinion that if grain were inspected under governmental auspices the American farmer and exporter would be the gainers thereby (or perhaps receivers abroad would).

"The bill provides," continued the senator, "for inspection and grading to be fixed and determined by the secretary of agriculture, the grades to conform as nearly as practicable to the present commercial grades in different sections. One feature of the proposed system would be the absence of the political influences which now impair the efficiency of grain inspection in some of the states. Inspectors would be appointed upon certification of the Civil Service Commission, and they would be transferred from time to time in order that they might not become subject to local influences. The measure would insure uniform and proper grading of grains, more just and scientific inspections, it would satisfy the farmer, in that he would have confidence in the grading and weight which he received, and also inspire confidence in the foreign purchaser."

[For the "American Elevator and Grain Trade."]

FIREPROOF COUNTRY ELEVATORS.

BY P. F. McALLISTER.

While the fireproof country elevator, as a type or class, is still in its infancy, it is bound to become more popular in the next few years, owing to the increased and increasing cost of wood and the approximately stationary price of steel and other non-combustible building materials.

As to the popularity of the various types of fireproof construction now in use, it is hard to say which has the advantage, or preference, at this time, on account of the comparatively few elevators of the fireproof type in existence in the country. There are, of course, some tile tanks, as well as tanks of steel, of brick and of concrete, scattered through the country. But these are for the most part the properties of milling companies; and when the owners are approached for an opinion on the question which is the best kind of storage, the questioner will invariably be told that the type of tank owned by the person interviewed is the best. For which reason, and the absence of a definite and impartial formulation of practical experience, to be used as a guide, either for builder or owner, the contractor and builder must be prepared to erect storage receptacles of any of the various materials named.

Regarding the comparative expense of storage plants of these various materials, it is difficult to make an estimate of the cost per bushel in a general way, owing to the variation of cost of materials in various parts of the country, and also because the elevator equipment requirements differ quite widely in the country; so that it requires large experience applied to individual cases to arrive at relatively close figures without actually making plans and detailed estimates for everything required.

The recent burning of wooden working-houses where there have been steel, tile or concrete storage bins in connection with them, seems to indicate that either of these materials will stand a great deal of heat before the grain in store becomes ignited or is even damaged. Nevertheless, we consider the construction of fireproof storage bins in connection with a wooden working-house a great mistake—with emphasis on "great." The reader must, of course, have reasons for all positive assertions by a writer; wherefore, as this assertion is contrary to the practice of some builders, I would submit the following simple hypothesis in support of my position:

Let us take the case of the recent fire at Harvey. Assuming that the fireproof tanks are full of grain contracted for removal at a given time. When the working-house burns or is destroyed, how can this grain be moved except at ruinous

expense by hand or at a heavy expense for the erection of a temporary machinery equipment especially for that purpose, and which in all probability will be good for nothing but the scrap pile after the particular work on hand is finished and certainly after a new working-house shall have been erected and equipped?

There are other valid objections to the combination of structures objected to; but let the above suffice as the basis of the advice to build an all-fireproof house or an all-wood house.

CERTIFICATE FINAL ABROAD.

There are indications abroad that the system of buying grain there on "certificate final" terms will come to an end in the not far distant future unless there is a change in the methods of shippers to the Continent and Great Britain. The objections of British millers to the system, as it relates to wheat, have been growing in volume and force for several years, and to these are now added those of Continental importers of American corn.

These last make no new story; for complaints were heard several years ago when American corn went abroad in quantity. Now that corn is going that way again, the grumblings have been renewed; and Consul Diederich at Bremen reports to the Department of Commerce and Labor that—

The committee of grain dealers at Rotterdam sent a circular letter recently to a number of the largest European trade centers, complaining of the bad condition of American maize delivered at their port, the quality of which does not at all correspond with the accompanying certificates issued by and under the authority of the American boards of trade and chambers of commerce. The committee states that this deplorable condition is felt all the more keenly, as under the business rules that now govern the purchase of said article, no legal objections can be raised against certificates covering such shipments.

The Produce Exchange at Krefeld has taken this matter in hand, and has learned that the same complaints are made in England, France, Denmark, Sweden, etc. The London Corn Trade Association, in giving its opinion on the matter, states that the only remedy for these evils is not to buy according to certificates, and to insist upon other terms. A convention of German dealers in grain thereupon issued an address to similar associations in Belgium, Denmark, Germany, Great Britain, Holland, Norway, Sweden and Austria-Hungary, asking for their co-operation in determining not to buy maize or corn of the United States of America in the future on the basis of certificates, but solely on the condition that the grain be found of good and sound quality when delivered in the European markets.

At the recent International Conference of the Milling Industry, held at Paris, this subject was the topic of a paper by M. J. Th. Cramer, secretary of the Association of Dutch Millers, Rijswijk, near The Hague, who dwelt upon the absence of what he called a "good contract"—one "which carefully regulates relations between buyer and seller and provides for arbitration by impartial arbitrators in case of any dispute."

The present method of dealing in "parcels" of grain is, he says, comparatively modern. Formerly all buying by consumers was through middlemen on the ground, and disputes were easy to settle; but when the buyer began to deal with the shipper in another country or on another continent, a different contract was necessary. Then (1878) came into being the first grain contracts of the London Corn Trade Association, which after many amendments have been in general use ever since, notwithstanding the fact that London has ceased to be the exclusive transfer port for grain imported by the Continent, as it once was. Owing to the expense of buying through London, and the fact that Russian and Roumanian banks began to finance shippers of eastern Europe, western Europe, in the course of time, began to buy wheat direct, but under the old London contract, as was the custom of the trade. Unfortunately, however, arbitrations under this contract must be in London, a fact that has tended to break down this traditional

form of contract among Continental buyers for obvious reasons, and the unfortunate knack that samples have had "of losing on the road the abnormal features which have been the cause of arbitration."

Then came the Belgian contract, constructed on the model of the London document. This becoming obsolete, the Rotterdam contract came into use in Germany and Holland. It was not a recognized document, as the text differed somewhat with each firm, while the details of the arbitration features proved unsatisfactory, so that the new German-Dutch contracts for Black Sea, Azoff, Danube and Baltic have taken its place.

All this, however, has rather an academic than an active interest at this moment, for American and Canadian shippers, since American grain is sold as a rule on terms export inspection, "certificate final." Of this system, Mr. Cramer says:

If experts who were thoroughly to be depended upon were to inspect cargoes or parcels just before they were shipped, or delivered for consumption in the interior, this would be the best way of doing business. As it is the buyer undertakes not to advance any claim on account of inferior quality; the certificate is final as to quality. Of late, however, serious complaints have been made against this system. In many cases the seller wants to put off the buyer with "Inland Inspection," but after undergoing this inspection the wheat often passes through several elevators, and in the course of this transit its quality may be seriously damaged. Again, exception has been taken to the work of the inspector himself. A certain trade journal stated the other day that a difference of 5 cents per bushel had been observed between the Minneapolis and Duluth inspection.

I will not enter at length into cases which do occur of the right certificate being attached to the wrong wheat, but I may remind you of such a case which happened recently in England. Under such conditions the buyer has no legal claim to any allowance for the delivery of wheat inferior to the grade he has purchased.

Another frequent complaint is this, that toward the end of the cereal year hard winter wheat No. 2 will have a strong likeness to No. 3; in this way the miller is deceived as to the quality of the wheat he is about to treat.

At the late convention of millers at Kansas City, a Mr. Anderson proposed the entire abolition of the certificate final, as being out of date. He would replace this by a certificate as to the hygroscopic condition of the delivery, such certificate to be issued by the authorized inspectors. He would also buy wheat at its natural weight, and according to the percentage of foreign bodies. At the conference held in Berlin on May 23 last, and known as the Deutscher Handelstag, this question of certificate was also brought up, but chiefly in regard to maize; there again, however, some members of the conference were in favor of the abolition of the certificate final in the case of wheat. In any case it is most dangerous for a miller to put up with a certificate of inland inspection.

In the absence of any action of a binding character, Mr. Cramer makes the following suggestions:

In every miller's office there should be hung on the wall these words in golden and large letters: "Only Do Business with First-class Houses." Many people are quite willing to admit that it is better to pay more money to a solid firm than to buy at a lower price from sellers whose reputation is uncertain, but as a matter of fact, it is often very difficult to know whether a firm deserves credit or not. Yet there is a very simple way of avoiding losses on this account if only all buyers were agreed. The buyer has to pay down money for a piece of paper which very often is not even signed by the captain of the ship, but only by a shipbroker's clerk. The buyer, therefore, is exposed to every kind of risk—defective quality, short weight, wrong documents, etc. Would he be unreasonable if he expected—just as he requires an insurance policy to cover the risks of the voyage—a banker's guarantee covering the above mentioned eventualities? I would, therefore, have the seller attach to his draft, not only the bill of lading and the insurance policy, but also the guarantee of a first-class bank, doing business in the buyer's country, such guarantee to cover the due execution of the contract in the largest acceptance of the term.

The purchase of grain with guarantee of natural weight at place and time of shipment is a matter which is also in need of uniformity of conditions. For loss of natural weight during the sea voyage 1 per cent is deducted in favor of the seller, both at London and at Rotterdam, whereas at Antwerp the refraction is 1 kilogram per hectoliter (2.2 lbs. per 2 5-6 bushels). To avoid mistakes and above

all to facilitate the comparison of different offers, it would be well to insist on a uniform margin, and this should be also applicable to sales f. o. b. The automatic scale, the use of which is laid down in the German-Dutch contracts Nos. 1, 2 and 3, 1904 and 1905, is to be recommended for the accurate determination of natural weight; it weighs and measures to the nicety of .1 kilo per hectoliter, and can be tampered with neither by seller, buyer or weigher-out.

ARBITRATION.

A trustworthy system of arbitration for dealing with all disputes is of the greatest importance. Under existing contracts arbitration is carried out in three different ways:

(a) By the so-called friendly arbitration provided in the contracts of the London Corn Trade Association. Each party names an arbitrator, who must be chosen from members of the London Corn Exchange, the Baltic, or the London Corn Trade Association. If the arbitrators cannot agree they jointly name a third arbitrator, or umpire. It comes to this that of the first two arbitrators each acts as an advocate, while it is the umpire who really delivers judgment.

(b) Arbitration as prescribed in the German-Dutch Contracts Nos. 1, 2 and 3, which might be termed semi-official arbitration. In this system the official representatives of the grain trade in the port of arrival prepare a list of arbitrators, which must contain at least 18 names. Each of the parties chooses an arbitrator from the list, while the official representatives of the grain trade nominate a third arbitrator, or umpire, from the list in question. This affords a guarantee that the umpire, whose decision is final, will be an absolutely impartial individual to whom neither party can take exception, as he has been nominated by a body which is quite foreign to the dispute.

(c) Official arbitration, as provided by the contracts of the *Chambre Arbitrale et de Conciliation pour Grains et Graines*, of Antwerp. A standing list is drawn up by the chamber and a certain number of these arbitrators is always in session. Whenever a dispute arises the committee of the chamber nominates certain of these arbitrators to decide the point at issue. The two parties, therefore, appear, so to speak, before three judges in the nomination of whom they have absolutely had no choice. This third system of arbitration seems to us the most just and impartial. But in practice the system mentioned under head "b" has also given very good results.

President J. J. Van Wyngeart of the German Millers' Union, speaking to the same international body, adopted the attitude that is becoming unfortunately too common among German critics of American commercial affairs of assuming dishonesty on the part of American inspection officials. There is probably fault enough to be found by European buyers with American inspection, but Mr. Wyngeart is distinctly impertinent in attributing the defects of grain received abroad to the venality of the inspectors, "many of whom," he charges, "are accessible to bribes; others are incompetent to rightly judge wheat." This is a characteristically German charge against American officials, but it is wholly unwarranted and slanderous.

Mr. Wyngeart was fairer and much nearer the truth when he added:

Apart from all that, every expert in grain is quite aware that his work is not always the same. He is dependent on the light, on opinions and other factors. His judgment is apt to be influenced by the result of the harvest, and by the arrivals in his district. It is, therefore, possible that the same quality which in one place was shipped as No. 2 in another may be certified as No. 3. For instance, there are glaring inconsistencies in the quality of hard winter wheat No. 2 and Kansas No. 2. This will vary according to locality where the certificate was issued—Galveston, Baltimore, Philadelphia, New York or some interior points. The same is true of Northern springs.

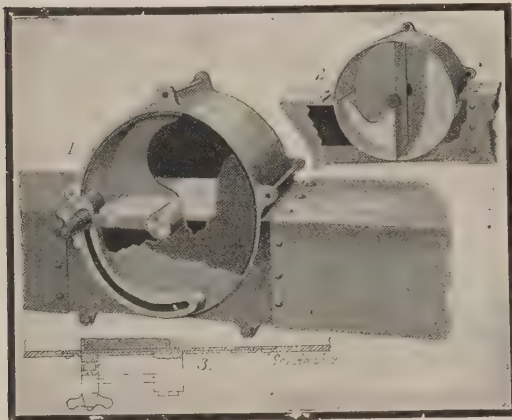
Apart from the question of the correctness of the certificate, other doubts may arise as to the identity of the wheat presented with that to which the certificate refers. How easy it is for the right wheat to get into the wrong place in the course of delivery out of elevator into railway trucks and thence into the ocean steamer, and from there into a river barge. How frequently are hard winters or red winters No. 2 and 3, and springs No. 1, 2 and 3 shipped into the same steamer? These abuses are known to European buyers, but hitherto they have been powerless in the presence of this American way of doing business. The American grain contract of the London Corn Trade Association does indeed take into account business on the basis of fair average quality of the season's shipments, and also of standard samples (about as per sealed

sample); but Americans refuse to trade on these terms, or they make such an increase in the price as puts all business out of the question. In such a case a reform can only be brought about by close combination and common action on the part of European wheat buyers. The ultimate buyers and the persons chiefly interested are the millers, and especially European millers. Whether American millers are also interested in this matter I am not in a position to judge.

"European corn merchants and millers should, therefore, insist, even in buying North American wheat," says Mr. Wyngcart, "on (1) delivery in sound and dry condition; (2) an agreed minimum of natural weight; (3) a limit being duly provided for admixtures of foreign bodies; (4) the buyer being freed from the obligation to accept delivery of wheat where there is a deficiency in quality of 5 per cent (at the highest, the limit should be 7 per cent); (5) the basis of trade being established on 'about as per sealed sample,' or 'fair average quality of the season's shipments at time and place of shipment; (6) dispute as to quality and all other disputes arising out of the business being settled by arbitration in Europe."

A NEW GRAIN VALVE.

An improved grain valve, the construction of which is such that when it is being closed there



THE NOTH GRAIN VALVE.

will be no shearing or crushing of the grain in the chute or conveyor, has been invented by George J. Noth, formerly of Davenport, Iowa, but now a resident of Chicago. The invention comprises a rotary valve having a concave or cylindrical valve gate that will enter the stream of grain or the like flowing through the pipe and pass through it at an angle that diminishes as the passageway becomes closed.

The valve casing consists of a box which fits into the grain conveyor or chute and whose upper wall is a plate bent into a semi-cylinder. The side walls of the valve casing are outwardly offset to receive two disks which form the side walls of the valve proper. The object of this offset is to bring the surfaces of the disks flush with the walls of the casing as shown in the lower figure in the illustration, and in this way to prevent grain from lodging at these points. The disks are connected by a diametrically disposed plate and by a curved or quadrant plate which extends from one end of the diametrical plate along the peripheries of the disks for a little more than a quarter of their circumference. The disks are formed with hubs which find bearings in the side walls of the valve casing. Secured to the projecting end of one of these hubs is a lever which at its outer end carries a clamping bolt. This bolt operates in a curved slot formed on the outer face of the valve casing and provides a means for clamping the diametrical plate in any position, thus regulating the flow of grain through the valve.

The large figure in the illustration shows the valve open with the plate lying horizontally, offering no obstruction to the free passage of grain. The valve is closed either partially or entirely by loosen-

ing the wing nut and moving the arm downward, which will bring the plate to the position as shown in the upper figure. The quadrant plate does not cross the path of the grain at a right angle during its entire movement; but, while it first strikes the grain at a right angle, this angle gradually decreases as the plate moves through an arc of ninety degrees until it is moving parallel with the path of the grain at its small portion of movement to the final position at a right angle to the passageway.

WISCONSIN INSPECTION LAW.

The call by Governor La Follette for a special session of the Wisconsin legislature to begin on December 4 will enable amendments to be added to the act creating and defining the duties of the Wisconsin Grain Commission. These amendments, drawn by counsel for the Commission, are partially in the nature of new sections, embodying the following points:

Railroad companies shall not deliver any car of grain until inspection fees are paid, and if not paid railroad company shall sell the grain to pay the fees.

Contracts for sales based on Minnesota inspection shall be declared void if grain is to be delivered in Superior or thereafter.

Existing sections of the law are changed to cover the following particulars:

Section 6 of present measure to be amended so as to make all elevators public, thus all the railroad elevators, whether leased or not, shall be made public.

Section 36, which extends the services of the Commission to other parts of the state when deemed advisable, is to be repealed.

Section 55 is to be amended by striking out the provision that the salary of the Commission will be paid by the state when guaranteed by a bond given by the Superior Board of Trade.

Additional sections are provided for the better execution of the act, as follows:

Commission can foreclose on grain for fees and if grain is in hands of railroad company said company shall be made a party to the suit and is to cover the cases now pending in court.

This act shall be liberally construed so as to carry out the instant of the law. If any section of this act is unconstitutional it shall not invalidate the rest of the law unless the court can plainly see that the legislature would not have enacted the rest of the law without the invalid portion.

MINNESOTA INSPECTION RECORD.

F. W. Eva, chief grain inspector, has presented the report of his department to the Minnesota Railroad and Warehouse Commission, covering the crop year ending August 31, 1905. The report shows a marked falling off in the volume of wheat. There was a good gain in coarse grains, however.

The report covers the six Minnesota inspection points: Minneapolis, Duluth, St. Paul, St. Cloud, New Prague and Sleepy Eye, where a grand total of 202,352 cars of grain were inspected, as follows:

| | | |
|---|--------|------------|
| Wheat | 55,564 | |
| Corn | 5,315 | |
| Oats | 24,089 | |
| Barley | 22,562 | |
| Flax seed..... | 21,400 | |
| Rye | 3,421 | |
| For the same period there was inspected out of store the following: | | |
| | Cars. | Bus. Into |
| Wheat | 59,963 | 19,632,490 |
| Coarse grains..... | 18,216 | 18,473,052 |
| Flax seed..... | 4,399 | 11,613,143 |

Regarding the business of the last year, the inspector states that there is a falling off in the receipts of wheat to the extent of 1,871 carloads, 11 carloads of rye and 9,238 of flax seed. A gain was shown of 1,080 cars of corn, 968 of oats, 2,036 of barley, making a net loss of 6,136 cars. The wheat received was divided into 11,118 of winter, 3,891 of western white, 1,537 of western red and 109,160 of northern spring.

The total receipts from all sources, all depart-

ments and all grains figured in revenues to the state department, were \$251,399.18. Of this the weighing department collected \$111,112.75. The total disbursements were \$251,106.60, a net gain and surplus of \$297.58. The department has on hand now \$94,313.32. The report further says:

Out of a total of 284,930 carloads of grain inspected on arrival and out of store, 30,947 cars were held out for reinspection, with the following results: In 14,153 cases the original grade and dockage was confirmed; grades were raised in 9,532 cases, lowered in 3,344 cases, and in 3,918 cases the dockage was changed. Appeals to the board of grain appeals were made in 11,009 cases, in 7,859 of which the decisions of the chief deputies were confirmed, and in 3,150 cases changed.

The number of cars received at the terminal points and found in what might be termed bad order were 9,112, out of a total of 202,352. Of these, 3,981 were without seals; 647 with seals broken; 1,019 with open end and side doors; 878 with leaky grain doors; 259 with leaky end, side and bottom; 970 with no fastenings; 1,330 were poorly fastened, and 28 with doors off.

Of the 109,160 carloads of spring wheat inspected on arrival at the six terminal points during the year, 14,911 were docked one-half pound a bushel; 38,954, one pound; 20,643, one and one-half pounds; 10,997, two pounds; 2,990, two and one-half pounds; 2,993, three pounds; 2,770, over three and at an average of four pounds, and 14,902 without any dockage. The net average dockage on total receipts at all points was 18.6 ounces a bushel, as against 21.1-6 ounces the previous year. Three hundred and fifty-eight cars of special bin inspections are not included in the foregoing figures.

The Wisconsin grain inspection law, which became operative on August 1, 1905, necessitated the withdrawal of the Minnesota inspectors and weighers from Superior, Wis. Since that time all grain for Minnesota inspection has been sampled at Cass Lake and Sandstone. Samples are taken in the usual manner and sent in sealed boxes to the inspection department at Duluth for inspection. This method of inspection has proven very satisfactory to the grain trade, as they are able to obtain the grades before the arrival of the cars at Duluth, thereby enabling them to make immediate disposition of same.

ERIE CANAL BUSINESS IN 1905.

The Erie Canal was formally closed on November 29, and the records show that the amount of grain handled by the canal eastward from Buffalo was 13,623,915 bushels of grain and 107,741,068 pounds of flaxseed, against 13,489,738 bushels of grain and 2,240,040 pounds of flaxseed in 1904.

"Surprise was expressed," says the New York Commercial Bulletin, "that the canal brought such a comparatively small quantity during the period of congestion, and there has been some disposition to criticize the possibilities of the improved barge canal in consequence. The explanation of this is naturally the fact that the present floating equipment of the canal is rapidly being extinguished by age, and there is yet no incentive to build boats that will be available for the barge canal. The present prospects are, therefore, that before the new canal becomes a practical undertaking the equipment on the old canal will almost have completely disappeared, and there has recently been some discussion as to whether it would not be wise to allow a period of complete closing of the old waterway if by so doing the 1,000-ton barge canal will be the sooner completed."

THE NEBRASKA "TRUST" CASE.

It is understood that U. S. District Attorney Baxter at Omaha has dropped "for good and all" the Worrall "grain trust" hot potato and will not bring the matter of the Nebraska Grain Dealers' Association before the Federal grand jury.

In the meantime a brief in the case brought in the Supreme Court of the state against certain members of the Association has been filed by the prosecution and two weeks' time from November 20 allowed the defense to prepare for oral argument of the case.

Seattle warehouses have been crowded to overflowing with wheat for more than a month.



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ADVERTISING.

This paper has a large circulation among the elevator men and grain dealers of the country, and is the best medium in the United States for reaching persons connected with this trade. Advertising rates made known upon application.

CORRESPONDENCE.

We solicit correspondence upon all topics of interest connected with the handling of grain or cognate subjects.

CHICAGO, ILL., DECEMBER 15, 1905.

Official Paper of the Illinois Grain Dealers' Association.

EUROPEAN COMPLAINTS.

As the American export corn trade revives so do the complaints abroad of the American inspection; so that on the Continent, at least, there is a movement among receivers to unite the importing trade on the proposition to force a change in the custom of buying on "certificate final" terms to one of buying on sample.

These complaints are very familiar to the grain trade, however startling and terrifying they may be to some of our consuls on the Continent. They have never particularly worried American shippers—for the very good reason, perhaps, that the latter have never suffered from the system complained of. But as only American sales of grain are made now on certificate final terms, it might be well, in view of the apparent purpose of continental powers, the German empire more especially, to cut out American purchases as far as possible, to inquire whether the complaints are or are not well founded. Taking into consideration the laxity of our out inspection at lake ports, compared with the in, and the habit of export grain of sliding off in quality as it nears the outport, which it leaves as "steamer" and not as the No. 2 it was when it started for the seaboard, there is prima facie ground for fault-finding.

These abuses of inspection, due to a letting down of the grade rules as the stuff nears the seaboard, will probably end the "certificate" final system, if continued. English millers have long complained of their losses by this system and the "dirt clause" in Indian and Black Sea contracts, and would long since have abrogated both contracts had the habitual conservatives of the Liverpool and London corn

exchanges yielded one iota of the traditional methods. They may yet unite with continental buyers to discard the certificate form of contract and buy on sample—a contingency subject to many objections to dealers on this side.

THE MESSAGE.

The President's treatment of the railroad question in the Message is characteristic. He pleads for fair play only. Having first discussed the problems of the corporation as a dynamic business force, he moves naturally to the railroad as one exemplification of the abuses to which corporation management is subject. He then mentions specifically a variety of railway abuses, all of which have a tendency to destroy that equality of opportunity that should exist for all men.

He does not point out "the exact terms" of the law he desires, but in a general way he repeats his original suggestion that the Commerce Commission, or some similar body, be granted power after investigation to correct an unjust or unreasonable rate, subject to judicial review; that the private car lines should be brought to book; that elevator allowances should be abolished and all other forms of discrimination be destroyed, the roads at all times to have the protection of the courts against any unfair official orders. And above all there is a distinct repudiation of any demand for power in the Commission to originate rates or to generally reduce rates—only for power to correct abuses and inequalities that are made by the railways themselves. In order to accomplish this, he is even willing to go to the length of permitting pooling.

The reporters say the country was surprised at his moderation. Even the railroad journals must needs quibble to find fault. The Railway and Engineering Review says:

When it is understood that the change in rates on any commodity of considerable volume in any part of the country necessitates a change all over the country, it will be seen why the "reasonable time" required for adjustment is likely to be a good deal longer than the President imagines.

Just as if railways were not almost daily changing their rates—even promulgating commodity rates at midnight to go in effect next morning.

So the problem has been projected into the congressional arena—to stay there certainly until it is settled. When that shall be, who shall say, considering the complexion of the Senate?

NATIONAL INSPECTION.

Senator McCumber says he is encouraged by various circumstances to reintroduce his bill for the federal inspection of grain moving in interstate commerce. If the bill is no better than his former effort he may feel assured that its advocacy will be a love's labor misapplied—that other bill was so utterly bad it was hardly worth the trouble of killing. The only bill for federal inspection that is worth an instant's thought would be one to unify the grading rules for grain in interstate commerce and to provide for a fair inspection of grain for export. But neither of these points seems to be in Senator McCumber's mind or

bill. He appears to think all the complaints of our inspections, at home and abroad, can be removed by putting the inspectors under civil service rules. Now, we have a profound respect for that belief, but when national inspection is created, based on grades "conforming as nearly as practicable to the present commercial grades in different sections," not the best civil service extant could save it from the ultimate damnation of its friends. On this earth a soul must have a body to house itself.

STILL PUSHING IT.

The Uniform Bill of Lading Joint Conference Committee met at Virginia Hot Springs on November 30. The sessions were behind closed doors and no information has been given out except a report of "progress." It was agreed last June that until this question is settled the carriers in official classification territory would not try to put the proposed bill into effect; but with strange disregard for plighted faith, the objectionable bill bobs up every little while, just the same, representing a consignment of grain. The shipper accepted it, evidently as a matter of course. It will take some men a thousand years perhaps to learn the very first principles of self-protection and even then fail to exercise their rights.

CROP REPORT INQUIRY.

It appears that the Keep committee investigation of the Bureau of Statistics of the Agricultural Department was finished about December 1, but nothing is known of what the committee has determined upon, save a general report that it will recommend that the Bureau be abolished and its work turned over to the Weather Bureau. Such a report would be consistent with the character of the committee, which is composed of men who for the most part never saw a Western corn or wheat field or cotton growing outside a botanical garden. Nor has the committee been conspicuous for the quality of its investigation, very few experts outside the department having been heard, and none on the merits of the monthly crop report.

The crop report has, of course, through the performances of Holmes and Hyde, a blot on its scutcheon; but the clamor in some quarters for its abolition, or degradation to a side line of the Weather Bureau, will hardly find approval in the country. What the grain growers and grain dealers want is an improved report, not a makeshift. The most perfunctory sort of an inquiry by the committee would establish this fact.

What is needed is a report that shall point the way to such a reorganization of the Bureau and its corps of crop reporters and field agents as shall bring the crop report up to the requirements of the case. It so happens, however, that the committee on department methods also is investigating the Bureau, as it goes through the department generally, which complicates matters. As, however, the report of the latter committee will go to the structural reform of all the departments, including this particular Bureau of Statistics, while that of the Keep committee will probably cover only

the incident of Pa Wilson's incorruptibles going wrong, just like common insurance company presidents, those who have ideas on what should be the permanent constitution of the Bureau, as well as of the manner in which a crop report ought to be made, should not hesitate, as the New York Commercial Bulletin suggests—

to bring them to the attention of the members of the committee on department methods. By that means the committee will be enabled to know what points are deemed most worthy of investigation by the business world, and will at the same time be put in a position to keep in touch with public sentiment. It will get the support which is derived from a knowledge that its labors are appreciated, and it will be able to make its recommendations much more intelligently. If those who have been complaining of the crop report service do not take this occasion to make their views known, and if the recommendations of the committee should be acted upon, they will be in a measure debarred from further criticism of the reports, since it can truthfully be said that their suggestions are entirely destructive and not constructive. An opportunity is now at hand for those who have been injured by defective crop reports to make themselves heard and get results. Experience shows that another occasion of the kind is not likely to present itself very soon.

PROPOSED NEW CHICAGO RULES.

"It is our contention," write Messrs. Pope & Eckhardt, in a personal letter to the editor, "that the rules of inspection should be so framed and so interpreted as to contribute to the best good of the producer and dealer in the West, who ship grain to this market; and at the same time so fair to buyers and distributors in the East, who are at all times large buyers here, that it will encourage the greatest freedom of business with this market and breed confidence in both the shipper and the buyer that both their interests will be conserved and protected to the utmost by the state" which has control of the inspection department.

Messrs. Somers, Jones & Co. make a similar remark in their article on the rules, printed on page III, when they say in substance that the interests of the shipper and the actual receiver and distributor of grain should, in the making of grading rules, outweigh the interests of the "speculative buyer."

This is sound doctrine, to which the department should return as speedily as possible; for, whether knowingly or not, the department in practice has departed from the principle enunciated, to the injury of this market. No healthy market can ignore the speculative buyer—he is the balance wheel of the mechanism; but it is not necessary to create artificial grade conditions to tempt him into the market. Rather, they drive him away. The legitimate speculator asks only for grain that is marketable as the grain it purports to be when he is compelled to accept delivery; but the department has been trying to do better than that by the "long." This "intention was honorable," perhaps, but it has resulted, as a matter of fact, in driving away the true speculator, who as a short seller in the long run suffers even more than he benefits as a "long" by artificial conditions. Nor do the latter encourage the shipment of grain from the country for obvious reasons; so that the artificial conditions complained of in the past benefit only the terminal elevator holder of contract grain, which he has manufactured largely in his hospital and not received from the country. Now, in making

up and, if adopted, in administering the new rules, the public elevator man should not be the only interest in the line of distributors to be protected. Let someone else have a chance.

ILLINOIS RATES REDUCED.

The Illinois Railroad and Warehouse Commission has ordered a horizontal reduction of 20 per cent in railroad rates in this state. The railroads will no doubt obey the order, on General Grant's theory that a bad law well executed will repeal itself. The roads claim that it will do all sorts of damage to railway revenues; but if some of the water were squeezed out of the bonds and stocks of state roads, they still might stand the reduction and pay their debts and dividends. It is hard on investors, but the people of the state ought not to be compelled to pay dividends and interest on aqueous solutions of securities. Of course this is generalizing only, since this writer does not pretend either to question or to approve the propriety of a proceeding that has been before the Commission for several years on petition of an influential body of shippers from all parts of the state.

KILN-DRIED CORN.

So far as the grain trade has expressed its opinion on the subject, it has almost unanimously objected to Inspector Cowen's proposition to allow kiln-dried corn to grade at Chicago no better than 3 under any circumstances. Among the reasons for this objection are the following: Admission of kiln-dried corn to the contract grade would broaden the market and make squeezes less severe; drying of corn has helped the market for low grades by reducing the difference from six to nine cents per bushel; kiln-dried corn is commercially a desirable product that is sold at a premium to consumers and others, not elevator operators who never buy 2 corn and are the competitors of the driers for the low grades.

On the contrary, the objections to kiln-dried corn is based on the claim that it is not naturally dried and is therefore not a natural product in the same sense that naturally cured corn is; that it is baked and brittle, breaks up readily and becomes mealy, etc.

These objections, while still valid to a certain degree, are probably not sufficient reasons for the exclusion of kiln-dried corn from the contract grade at this time. The corn drier has learned a good deal about corn in the past two or three years, and his product has correspondingly improved, so that a corn that New England and foreign buyers are willing to pay a premium for ought to be good enough to grade contract. At the same time, it must not be overlooked that corn must be dried scientifically.

For example, Inspector Shanahan of Buffalo, on another page, calls attention to one cause of difficulty with kiln-dried corn, which, being commonly observed in all receiving markets, may have been one cause of Mr. Cowen's proposal to confine this corn to the 3 grade. It is also a familiar fact that corn containing 15 to 16 per cent of moisture is a more

merchantable commodity and a safer grain in its natural state, if conditioned by running over and giving it plenty of air, than corn partially dried artificially. But the quantity of such corn is limited at all times and especially so at certain seasons, wherefore the necessity of drying corn to meet the Eastern and foreign demands, neither of which could be supplied without the drier.

If, then, corn is dried artificially to remove only the excess of moisture, above say the 13 per cent permissible in No. 2 corn, is not over-dried or baked and is thoroughly cooled, inside and out, it is difficult to see how such a product is commercially unsound or objectionable, especially as buyers of corn the world over prefer it to the ordinary run of No. 2 corn naturally conditioned, so that it has become at certain seasons an actual necessity in order to conduct the Eastern and export corn trade successfully.

IS HE INTERESTED?

A rather remarkable fact in connection with the proposition to revise the inspection rules at Chicago is the apparent indifference of the country shipper to the whole subject, or at least to the draft of rules submitted to the trade by Chief Inspector Cowen. In offering the new rules to the trade, Mr. Cowen invited free criticism. Messrs. Pope & Eckhardt Co., in a printed circular to their many patrons and correspondents, pointed out the changes proposed and recommended their readers to communicate their views to the department. Doubtless other Chicago houses did likewise. Ourselves sent a large number of copies of the rules to prominent dealers, asking for opinions, and yet, important as the subject is, both the chief inspector and ourselves have received from country shippers practically nothing of opinion, either for or against the rules; and the entire number of criticisms submitted to Mr. Cowen is, comparatively speaking, insignificant, although some letters are very forceful in themselves.

This certainly is a queer showing. Does it mean that the country unreservedly approves Mr. Cowen's draft? To be sure, the changes, except in the oats and barley schedules, are not radical, but do country shippers, who for several years at least have been complaining of the inspection at Chicago, now unanimously approve of a set of rules that nominally at least are more stringent than the existing rules?

Or must it be believed that the average country grain dealer has become so accustomed to letting his commission man protect his interests in the market that he doesn't take time or trouble to think or to express his own mind on so important a matter? The faithful Mentor, even at the risk of a rebuff for impertinence, would advise his Telemachus that this apparent indifference is bad business judgment. If a man will not himself look out for his own interests he must not find fault if he gets the hot end of the deal. Now this question is still open, and the inspector and the department would welcome the suggestions which good business men ought to be only too glad to make for their own protection.

EDITORIAL MENTION

Keep your premises clean as the best preventive of fire cleaning the site.

The annual meeting of the Indiana Grain Dealers' Association will be held on January 17 and 18, 1906.

You can get some excellent pointers on the construction of elevator heads and legs by reading "Observer's" article on another page.

The Kansas Grain Dealers' Association will hold an annual meeting in January at Kansas City. The secretary will announce the date later.

The number of country elevators that run grain cleaners and clippers is remarkably small considering the profit they might yield under judicious management.

Keep tab on your insurance policies. Don't wait, as a Kansas firm did, for a fire to clean you out before you know whether you are insured or not, only to find you are not.

A contemporary speaks of "prohibiting" a fire from doing any further damage. Why not get out an injunction? The process is cheaper than the ordinary fire and would please the insurance men.

The weather has not been all that could be wished, and there is a good deal of corn that ought to be picked over as it goes to the sheller. It may cost something to have a boy do this, but it will pay well to do it.

At this season of extreme cold it is a good thing to have plenty of salt brine in the barrels placed in the elevator. But calcium chloride is better than salt for brine; for, being just about as cheap, the calcium makes a brine that does not congeal nor evaporate, while salt brine may do both unless watched.

The notorious Pickering and Waters of the Southern Indiana Grain Company of Sellersburg, Ind., have been indicted at Indianapolis. This precious pair, acting as bankers and receivers of grain, managed to absorb considerable grain before the trade sized them up. It is time they paid for it by doing hard labor for Indiana, since they will pay in no other way.

Ware & Leland are fortunate. They had a client in Iowa who "laid down" on them \$1,050 worth, losses on deals made at their office at Perry. Now in Illinois such deals are, legally speaking, bucket-shop transactions and not collectable by law; but in the Iowa court contracts for future delivery of commodities, on the strength of a Federal Court decision, were held to be legal if either party intended in good faith to deliver. As a Chicago Board of Trade firm, Ware & Leland could do

no less, whether their client anticipated delivery or not. The case is especially noteworthy as being a reversal of the former decision on the same question in Iowa.

The latest fake grain company, which seems to have robbed some Indiana shippers, was the Eclipse Commission Co. of Nashville, Tenn. The company was in business but a short time for obvious reasons, and appears to have been composed of an elderly man called Tressel and a young woman. Their victims may try a respectable and authenticated firm next time they consign to Nashville.

The deputy inspector of weights and measures of North Dakota finds many scales out of order from natural causes, but he says that evidence that elevator scales are "doctored," as often charged, is wholly wanting. One of the most conspicuous cases of disorder in elevator scales was that of a scale which had weighed against the owner to the tune of at least a thousand dollars before he suspected anything wrong.

The Christie aggregation is getting ready to break into Memphis and the Commercial newspaper has been prattling about its million of capital and what it "means for Memphis." Memphis is "sporty" all right, but even the Commercial ought to realize that when it comes to comparison with a bucket-shop a reasonably decent gambling house, that doesn't disguise its real character under a stolen name, is respectability itself.

Now that Superior has Wisconsin inspection, with all the fireworks, the Superior Board of Trade seems to be trying to break into the Duluth Board of Trade and let the Superior Board "go hang;" and Duluth is equally anxious to get the men, for only one of those who applied for membership has been rejected. Superior as a grain mart seems to need the confidence and support of its own people pretty badly just now.

The scale reports of the Iowa Association's expert have shown so lax a condition of things in that state that there is now talk of a bill in the next legislature for a law providing for the appointment of experts to examination of scales in every county. The Association has been doing very good work in this line, but it can hardly hope to do all that Expert E. J. Nolan's reports indicate must remain to be done.

Thirty seed dealers recently asked the President to say something in his Message about the "seed graft" of congressmen. But, bless us, what's the use? The last time some sensible and well-intentioned congressman objected to the graft, "Pitchfork" Tillman spat hard, and the amount of the graft was doubled. So long as congressmen think this nasty little business makes them votes, they will keep it up; and so long as there are voters who think they can get something for nothing, they will make congressmen think that the seeds are doing the little business for them. Only when constituents come to see the obloquy of ac-

cepting such petty largess will the graft be looked upon as disreputable and be killed.

An annoying blunder escaped the eye of the proofreader in the November number of the "American Elevator and Grain Trade," which permitted the type to locate the Metamora Elevator Co., whose premises were described and illustrated (page 247), at Metamora, Mich., instead of Metamora, Ohio, the proper location of the company and of the elevator described.

Commission merchants who desire to keep their lists of Illinois dealers up to date can do so through the bulletins issued by Secretary Strong. Mr. Strong notes in this bulletin, which is published at frequent intervals, all changes that occur in the ownership of elevators in Illinois as well as new houses established and those going out of business. It is especially desirable that all lists be revised frequently and the information published by Mr. Strong is for this purpose.

The scarcity of box cars in the Northwest has resulted in the overloading of many of the grain elevators in that section of the country. Some of these houses that were not built sufficiently strong to withstand the great pressure of an overload of grain collapsed, with the result that much flax and wheat was spilled out on the ground. In the corn belt the same kind of accident is likely to happen to the old-timers that have escaped in the past and to the later houses designed and built by the local carpenter and contractor.

Chas. S. Hamlin, in an address to the New England grain dealers on December 6, said that if any federal body should be given power to fix specific rates on the railway lines, Massachusetts might as well go out of business. Mr. Hamlin is evidently in a panic—or "something else just as good." Discriminating rates are bound to go, sooner or later; but Mr. Hamlin, or his hearers, will never live long enough to see Massachusetts injured by a federal enactment of the President's policy of a "square deal."

The dissolution of the Nebraska Grain Dealers' Association is announced as having taken place at a general meeting held on November 17. It is just as well, under the circumstances. The state is full of befuddled ideas of the nature and mission of the Association, industriously propagated by Mr. Worrall's book and lawsuit and the idiotic country press; and it would be impossible to continue its existence with anything like satisfaction to its members. It is not impossible that the issue of the action at law now before the Supreme Court of the state will tend to put the dealers of the state in their rightful light before the public, but just now there is so much prejudice against the Association and its members that it were better for the personal status of individual dealers that the Association should cease to exist until the crazy agitation is ended and the newspapers of the state learn, if they ever will learn, something more of the nature of the grain business and the conditions under which

it is carried on. In the meantime, if some sort of a school of education could be established for befuddled publishers in Nebraska, the state and her people would profit vastly by a return to sanity.

A writer in the hay department this month says he thinks there is no other line of business that is carried on in such a haphazard way at the country end as the hay business, both with regard to buying from the farmers and the loading and grading of cars. One can readily sympathize with our correspondent. The slip-shod methods of some men are as inexplicable as they are exasperating. But the hay and the grain men are not exceptional; they are not the freaks of the human family. Other men are slip-shod, and other receivers, too, complain. But, of course, that is no excuse for slip-shod. Men should study their business to know it well enough both to avoid slip-shod themselves and to refuse to tolerate it among their employees, because carefulness pays big dividends.

It is announced that the elevator companies who joined to open a "bargain counter" store at Lowry, Minn., to fight the local merchants have decided to quit merchandising now that the attorney-general of the state has gotten after them. That discretion which is the better part of valor should have been exercised before the authorities moved against the offenders. Of the merits of such cases there is little to be said. It is aggravating to be annoyed by a competitor, especially one that does things. But no man or corporation engaged in the grain trade ever made a dollar or a friend by attacking the grain producers or their immediate friends in the region of their pocketbooks. A much better plan than the Lowry plan is to lie low and bide one's time. Everything comes round to him who waits, and no one has to wait very long in a co-operative community for the band wagon to reach his corner if he's good.

While the Chicago Board of Trade voted down the 80 per cent payment measure, it is the opinion of many of the receiving houses that out of the general discussion there will sooner or later come up a change in methods which in all fairness to all branches of the trade can be adopted. The receiving houses contend it is unfair to compel them to wait all the way from two or three weeks to six or eight weeks after transferring ownership in a car of grain before they can secure payment, as is the present custom. The 80 per cent value of a car is advanced to the shipper, and a rule whereby the receiver could secure from the buyer a like percentage of the value would be but just and would obviate the necessity of having large amounts of money tied up or heavy obligations incurred at the bank on which interest is paid without a like return in the shape of interest on the advances to the shipper. But the measures which were disapproved would, if adopted, have transferred the burden to other shoulders and for a time at least would have disorganized the trade. That the receiving houses

ought to be better protected no one denies, but the problem is to secure a measure which will protect them without working severe hardship on some other branches of the trade.

A well-known track bidder says he believes in track bidding; but his principal reason is that everyone else is doing business that way. When asked what he would do if he himself were shipping, he admitted, confidentially, that if shippers would all make a practice of shipping their grain to be sold on its merits instead of shipping it on a track bid of "No. 3 or better," it would be more beneficial and profitable to the shippers generally. Track bidding is good for the bidder because his chances of losing on a "3 or better" transaction are slim, while he wins out, from time to time, several cents a bushel on "better," most of which money would go into the pocket of the shipper if he sold on consignment. A profit for the shipper is read into the bid, of course, because he expects to buy from the farmer at a figure to yield a profit, but it is just as easy to get the full value of grain at any time by shipping it on commission to a good house, and the system has the advantage of yielding extra profits on the rise and on the better lots.

Grain buyers in Eastern Indiana and adjacent territory in Ohio have resumed for the moment the practice of buying corn by the hundredweight, and both they and their patrons are probably amusing themselves in their hours of leisure in running out to the vanishing point the decimals of the price per bushel. Of course, if the farmers will stand this kind of muddling the commercial unit, the bushel, with centals and all that sort of thing, and both sides of the trade like the mix-up, which dealers must unmix when they sell, well and good. But it does look like boy's play to increase the buying unit to 100 pounds when it might be 68 or 72 pounds, and lose the profit per small unit which might be taken just that much oftener. If the grain trade anywhere on earth outside of California dealt in centals it would be different, but the world known to American grain dealers thinks in bushels, and it will be a long day indeed when a few country dealers will be able to overturn the established trade customs and precedents of the trade.

The attempt in Chicago to pass an amendment to the rules to require payment of 80 per cent of the value of car lots of grain on delivery of the bill of lading, had, of course, little direct interest outside the receiving trade. Nevertheless, discussion of the proposition throws no little light on the burdens of the receiving houses, which country shippers might well bear in mind. The rule now is that buyers of grain shall pay "within fifteen days after actual delivery of the grain to the railroad named by the buyer." Under the rule, one commission house alone had outstanding the cash value of no less than 163 cars of grain for which they had paid the country dealer, but for which they themselves had received no returns and on the cash value of which they "stood pat" to lose at least fifteen days' interest.

Under the circumstances, the cuss words such a firm would probably hurl at a shipper who would overdraw heavily on grain that misses grade would be picturesque as well as justifiable. The actual direct losses to receivers by the rule have been infinitesimal, but the interest account of houses doing a large receiving business would startle a country dealer who is in the habit of getting spot cash for his stuff as he ships it.

The most sensational of recent rate cuts was that on export grain over which the Western roads are now jangling and of which Baltimore and Philadelphia should receive the benefit to the extent of handling 2,000,000 bushels of corn to be exported in December and January. As Mr. Rutherford in his article on the subject on another page says, the proceeding ought to be the final straw to break the backs of those indifferent to the crying need of reform. This cut was entirely uncalled for, the roads suffering from too much business instead of too little; so that the proceeding was apparently a deliberate one for the benefit of certain individual shippers of corn. It is such proceedings that destroy public confidence in the disposition of railway men to be fair. It is but another form of the graft that has disgraced the big insurance companies—the prostitution of fiduciary trusts to personal gain, either of the trustees themselves or their friends. It is a condition of things that is becoming intolerable, unfair, as it is, alike to the public and to the owners of the roads in question. It is also notice that the railway managers will not treat the public impersonally, as they should, until the strong arm of the nation's law compels them to do so.

Now that the Nebraska newspapers have thrashed out the "grain trust" and Tom Worral and the rest to a finish, the case has gone to the courts, and was last week argued in the Superior Court. It might be painful to some, but not surprising to many, should it turn out in the end that a handful of line elevator men, track bidders, of whom Tom Worral was one, at one time named the prices that could be paid for grain in that state; and that these prices out of the necessities of the case were the prices paid and were not unfair. As the attorney for the Nye-Schneider-Fowler Co. says in his brief in the case,—

It is as impossible for two competing grain dealers to pay different prices, and the low man get any grain, as it would be for two competing railroads to have different rates and the high one get any respectable share of the traffic. Whatever the practices of the grain men of Nebraska may have been, they have produced results that have been fair, honest and reasonable to the grain producer. The defendants have taken no testimony in this case. The state has taken considerable, and has been surprised thereby. The nature of this evidence has been such as to cause the attorneys for the state to say in their brief: "To do justice, however, we must here admit that it [the 'trust'] had, everything considered, exercised despotic power with clemency." This is a fair and candid statement on their part, but they have much to learn yet.

The suit will probably convince the rational; but no one hopes to either convince or silence the demagogues who have charge of the grandstand advertising of this case.

TRADE NOTES

The Jeffrey Manufacturing Co., Columbus, Ohio, has opened a New England branch at 141 Milk Street, Boston. H. C. Freeman is in charge.

Jeffrey Catalogue No. 20 is a 142-page book showing the line of coal-handling machinery for mines made by the Jeffrey Manufacturing Co. of Columbus, Ohio. The catalogue is sent free on request.

"Hedging" is the title of a little booklet issued by Rosenbaum Bros., Chicago, which will be sent free of charge to readers of this paper. It shows the advantages of hedging when the business is done carefully through a conservative house.

George J. Noth is now representing the Invincible Grain Cleaner Co. of Silver Creek, N. Y., in Chicago, with offices at 406 Traders' Building. He succeeds W. J. Scott, who has gone with the Strong & Northway Manufacturing Co. of Minneapolis.

James H. Rhodes & Co., Chicago, who make a specialty of calcium chloride, inform us they were invited to a meeting of secretaries of the elevator and mill mutual insurance companies held at 205 La Salle Street, Chicago, on November 21. The secretaries desired further information on the subject of calcium chloride. Some of them have already made tests with this substance and have in their annual reports recommended its use in gas engines and fire barrels.

The Marseilles Manufacturing Co., Marseilles, Ill., is sending out a new booklet descriptive of the Improved Marseilles New Process Dustless Cylinder Corn Sheller. Those who are familiar with these machines know that they have been remarkably successful. But the manufacturers have not been content to rest on past successes. They have added improvements until the 1905 model is perfect in every detail. These points of superiority are explained fully in the booklet, which will be sent free on request.

H. L. Day, Minneapolis, Minn., manufacturer of Day's Dust Collecting Systems for grain elevators, has opened a branch office at 933-934 Monadnock Block, Chicago, which is in charge of F. H. Day. Mr. Day has been representing the Minneapolis house on the Pacific Coast for the past three years, with headquarters at Portland, Ore., and has installed the Day System in very many large western plants. The popularity of the system for grain elevators has increased steadily and the orders from the central states have made a branch necessary to take care of the business.

Burns Bros., the well-known grain commission merchants of Buffalo, N. Y., are distributing a handsome volume entitled "Buffalo of To-day." It is a book of 65 pages and 136 illustrations, giving a brief story of Buffalo's progress as an industrial city. The illustrations show many of the mills, elevators, factories and industrial works that go to make the city one of the leaders. The advantages of Buffalo as a place of residence and as a convention city are also considered, and many of the "show places" are illustrated. All in all the book is a handsome and interesting one.

The feed and meal mill machinery catalogue issued by Sprout, Waldron & Co. of Muncy, Pa., is a book of 120 pages and shows the complete line of feed and meal grinding equipment made by the company. The largest part of the book is devoted to Monarch Attrition Mills and Monarch Standard French Burr Mills, which are shown in the various sizes and styles and described in detail. The balance of the pages are devoted to other specialties, including the Monarch Six-Roll Corn and Feed Mill, Monarch combined crushing and grinding outfits, Monarch Cornmeal Sieve, etc. In fact, the book is a complete listing of supplies for the feed and meal miller. It is sent to interested parties free of charge and should be in the hands of every ele-

vator owner who makes a specialty of grinding feed.

The steel work of the United States Express Building, now in course of erection at Rector and Greenwich streets and Trinity Place, New York, N. Y., is being protected with a coating of Dixon's Silica-Graphite Paint. This paint is recommended for painting metal work of all kinds to prevent rust and corrosion, and is particularly desirable for corrugated iron, such as is used to cover elevators and mills. The Dixon Crucible Co., Jersey City, N. J., will be glad to have any of our readers write for information on this subject.

J. W. McCARDLE.

One of the best-known grain dealers of Indiana is J. W. McCardle, who as a receiver and shipper of grain was only a few years ago the special object of attack by a few agitators, who organized the only co-operative company that ever did



J. W. McCARDLE, NEW RICHMOND, IND.

active business in Indiana, located in his town of New Richmond. Well, the co-operative concern had all kinds of fun for about two years, but eventually turned up its toes and its business over to a receiver, who sold its property to pay its debts (some \$11,000), or as far as the proceeds of the sale would reach; and McCardle is still on deck.

Mr. McCardle is still a young man; for it is only twenty years ago that he went on foot to Indiana and engaged in the grain business in partnership with James Hodge, then of the Paddock-Hodge Co. of Toledo, now the United Grain Company. He has shipped to this company for all these twenty years, and might do so for twenty more; for he has always treated his people fairly, as they are now in position to know beyond any manner of doubt. And in this respect Mr. McCardle may be taken as a type of the Indiana dealers, whose relations with the farmers have always been cordial and satisfactory.

INDIANA DEALERS COMPLAIN.

At a meeting of central Indiana grain dealers at Kokomo on December 4, complaints were made of inspection at Toledo and Baltimore, and Secretary J. M. Brafford of Indianapolis and President H. C. Woods of Windfall, of the state association, were appointed to go to Baltimore and look over the field.

Grain dealers should give thanks because their profits average greater than their troubles. Speculation in grain may again become popular in time. National legislation could remove the cancer, the bucket-shops. Cars may become more plentiful.—C. A. King & Co., Toledo, November 28.

BALTIMORE'S NEW CHAMBER.

The Baltimore Chamber of Commerce formally opened the new building on November 25. The opening ceremonies were simple. The members to the number of more than 300 brought their families and friends and these with the invited public filled the trading hall to its capacity. The decorations were elaborate and beautiful, and these, with a reception to Senator Gorman, occupied attention until noon, when President Wylie appeared and introduced J. Olney Norris, president of the Chamber of Commerce Building Company, which had erected the building, who, in handing over the keys of the chamber to President Wylie, in part said:

On November 22, 1882, the members of the Corn and Flour Exchange marched in a body from their old building to the new, which had been erected on this site; and to-day, 23 years afterward, we are engaged in similar jubilee ceremonies, as we now occupy this new building. * * * * *

Mr. President, it gives me great pleasure to hand you the keys to the fourth floor of this building and to wish each member not only a prosperous, but the most successful, year you have ever had in your business careers.

In accepting the keys, President Wylie among other things said:

We were organized in 1850 and incorporated in 1853, and by 1855 our wheat receipts were nearly 3,000,000 bushels, corn about 4,000,000 bushels and oats 1,500,000 bushels.

The erection of grain elevators revolutionized the time-honored system of private warehouses, and we can store 5,500,000 bushels, besides the 20,000 bushels an hour capacity of our floating elevators. Our recent appropriation of \$1,250,000 from the government for the deepening of our channel guarantees to us unsurpassed water facilities and will probably make a necessity of what at the moment is exceedingly desirable at certain seasons—even greater elevator capacity, for we will soon be able to take care of vessels of deepest draft.

When the new docks are ready and our coming sewerage system completed, Baltimore will become what it should be—the equal of any seaport city in the world.

Gentlemen, we have been tried "as by fire"; may our intercourse with each other in this beautiful new building show that we have come out "pure gold," and may our motto ever be, "Each for the other, and God for us all."

The orator of the occasion was Judge Charles W. Heuvelink, who congratulated the Chamber of Commerce on the possession of so splendid a building.

In the evening a banquet was given at the Merchants' Club, at which President Wylie, Governor Warfield, Senator Gorman, Mayor Timanus and Charles Whitlock made speeches. President Wylie in part said:

Peace and harmony have always reigned in our institution from its inception, and there is recorded but one instance when, during the Civil War, there was a split in our membership; early in 1862 the Union members retired from the exchange and founded what was known as the Maryland Corn and Flour Exchange, for whose accommodation rooms were fitted up in the Hopper Building, corner of South and Pratt streets. I am glad to relate that the new association returned to the older organization after a lapse of but two or three months.

The Chamber has always taken the lead in advancing the interests of our busy city, and especially in obtaining transportation facilities, never refusing to lend its aid to the railroads, assisting in their development wherever possible. Many of us recall the excellent work done by our committee, which favored the building of the Belt line tunnel for the Baltimore & Ohio Railroad at a time when opposition to this enterprise had gained menacing proportions, and the strong effort in some quarters to prevent the Western Maryland Railroad from obtaining an enabling act at Annapolis allowing it to use the bed of Jones' Falls as a roadway was foiled largely, we believe, through our having sent strong delegations and having passed emphatic resolutions in favor of this scheme.

A glance at the list of the members of 20 years ago makes sad reading for those of us who recognize there the names of so many who have been closely identified with the upbuilding of our trade, and through it the city of Baltimore. Among those I may mention Mr. William S. Young, the noble and talented president of this Chamber at the time of our first occupancy of the building which has just been replaced by our present new home; the Messrs. Macgill, Mr. Israel M. Parr, Mr. William H. Perot, Mr. C. Morton Stewart, Mr. James E. Tyson, Mr. William Whitridge and Mr. Thomas Pierce; and still I feel that I have left the list incomplete. These have passed away, but their impress remains.

Baltimore's grain trade has been obtained and held only by constant vigilance, and it is a significant fact that our most prosperous years have been those in which we have had to contend hardest for our just rights. Let us not relax our efforts, but rather put forth every energy to keep this port in the forefront of grain and flour export centers the world over.

SPELT IN WHEAT.

While it is not probable that spelt will become a menace to millers there is a possibility that it may cause them some trouble until they and the farmers learn to distinguish this grain from wheat. Originally introduced into this country as a stock

well to procure samples and study its characteristics. By doing this and refusing to accept wheat containing even a small percentage of spelt they will soon be able to correct the mixing evil.

THE CAR SITUATION.

The prediction was made a month or two ago that, while the car situation at that time was deplorable, there was much reason to believe it would be considerably worse by the turn of the year—perhaps the worst the grain dealers of this country have yet experienced. The weather has not yet seriously interfered with traffic anywhere in the country, for which shippers are duly thankful; when

suits under the provisions of the demurrage bill passed last winter. This is a weapon which may prove valuable, as railroad corporations are much averse to paying a dollar a day per car to shippers without getting what they would term an adequate return for the money.

So far as the East is concerned, Buffalo grain merchants say the grain blockade has been caused by discriminations in rates by the Eastern roads against the grain interests at Buffalo. The export situation has cleared up some, but that has been due to the fact the foreign demand fell off sufficiently to allow the roads to catch up. Should a new demand for export grain develop, it would not be surprising to find the rail facilities again over-



A. HARD WINTER WHEAT.

B. SPELT.

C. HARD SPRING WHEAT.

D. FULTZ WHEAT.

food, spelt is now grown extensively, and, owing to its similarity to wheat, fear is expressed in some quarters that it may become mixed with wheat to such an extent as to be a serious nuisance.

Spelt is a fall grain and ripens about the same time that winter wheat does. While growing it closely resembles wheat, but the thrashed spelt usually resembles barley much more than it does wheat, since the chaff is not removed by the machine, but is left firmly attached to the kernels. Moreover, two kernels are usually attached to each other in the thrashed spelt, since the head is broken into the spikelets and not into individual kernels.

Millers, of course, are interested in being able to distinguish spelt from wheat in the grain after the chaff has been removed. Fortunately, the differences are so well marked that the two grains may readily be distinguished from each other. When a grain of wheat and a grain of spelt are placed side by side on a flat surface, the groove side down, the differences are at once apparent. It is noted at once that the upper side of the wheat kernel presents an irregular, broken contour, while that of the spelt is a fairly even curve from one end to the other. Next, the germ of the wheat is sunken and broadly oval, while the germ of the spelt is narrower, elliptical and elevated to form part of the somewhat regular curve of the back of the kernel. The wheat kernel is relatively broad, short and blunt, while the kernel of the spelt is longer, relatively narrower and drawn out to more of a point at each end.

Our illustrations, from original photographs, show spelt in conjunction with standard wheats. In the large cut A is hard winter; B, spelt; C, hard spring, and D, fultz wheat. In the small cut, E, is shown spelt from which the hull has not been removed. It will be seen that while spelt resembles true wheat there is enough difference to enable anyone familiar with the grain to tell it if any considerable proportion were mixed with wheat.

It is possible that a small percentage might not be detected, but a careful examination would probably reveal the presence of the objectionable grain. Owing to the difficulty of separating spelt from its hull it is probable that some unhulled grains would be present and this would at once establish the status of the suspected sample.

Millers who are unfamiliar with spelt will do

winter does set in in earnest, however, the situation will be much further complicated.

Grain at many points is now piled high outside of elevators along the railroads, even in Indiana, waiting for cars. Elevators are loaded to full capacity and beyond that point, and many of these, especially in the Northwest, are bursting and spilling their grain upon the ground. All branches of trade are complaining, as the car shortage is far reaching in its effects—from the farmer to the ex-



E. UNHULLED SPELT.

porter. Much larger sales could have been made during the past month for export if the sellers could make delivery within a reasonable time limit. Shippers place their orders for cars, put their hands in their pockets and whistle, hoping that by some hook or crook they may accidentally get a few.

The railroads are called upon this year to move an unusually large amount of freight, and are having an extremely heavy demand made upon them for cars to move also crops of grain and hay. It seems only reasonable, however, to expect the various roads to keep pace with the development of the country in which they have a monopoly of the transportation business, and be ready for the business they know must be handled and furnish cars to shippers within a reasonable time.

In Oklahoma shippers have got tired of waiting and have announced their intention of instituting

taxed. Were the empties returned from the seaboard to Buffalo to relieve the congestion there, it would help matters considerably and no doubt solve the export problem which has been bothering New York for a month or more. But the railroads prefer a long haul to the West, and so the congestion from the lakes eastward continues.

There is a widespread opinion that the railroads scheme and plan to move the grain crop of the country not too quickly, on the theory that an even distribution throughout the year is of the greater benefit to the farmer because he secures higher prices for his produce in that way than would be possible were there a general movement in a comparatively short time—and prosperity to the farmer means prosperity for the railroads. The latter know the farmer must market his grain and that they must transport it for him sooner or later. Hence they are in no hurry on that score, but go after the commodities that demand immediate attention and the competitive business which a little delay might divert to some other road.

NEW YORK CHARGES.

The grain men of the New York Produce Exchange are again endeavoring to secure a reduction of the port charges for cleaning export grain at New York. On wheat, corn and oats these now amount to three-sixteenths cent per bushel over and above what it costs to send export grain through the other Atlantic out-ports. "Those interested in the export trade," says the Commercial Bulletin, "are particularly anxious that rates at New York shall be reduced to the lowest possible limits, in order that they may be able to meet the differential railroad charges that are maintained against the port. Mr. Edward G. Burgess, president of the floating elevator combination, said, when questioned, that he did not see how a reduction would be at all possible, for the charges at the present time were as low as could be made, and at the same time give New York an efficient floating elevator service."

The Indiana Corn Growers' Association will hold its annual corn show at Purdue University, Lafayette, on January 8. to 13, both inclusive.

RECEIPTS AND SHIPMENTS.

Following are the receipts and shipments of grain, etc., at leading receiving and shipping points in the United States for the month of November, 1905:

BALTIMORE—Reported by H. A. Wroth, secretary of the Chamber of Commerce.

| Articles. | Receipts. | | Shipments. | |
|------------------------|-----------|---------|------------|--------|
| | 1905. | 1904. | 1905. | 1904. |
| Wheat, bushels..... | 849,313 | 237,061 | 483,049 | ..... |
| Corn, bushels..... | 2,284,317 | 577,311 | 627,442 | 31,000 |
| Oats, bushels..... | 1,540,166 | 172,638 | 1,521,885 | 20,730 |
| Barley, bushels..... | ..... | 10,208 | ..... | ..... |
| Rye, bushels..... | 123,386 | 227,959 | ..... | ..... |
| Timothy Seed, lbs..... | 981 | 5,128 | 3,177 | 4,058 |
| Clover Seed, lbs..... | 489 | 4,118 | 313 | 9,417 |
| Hay, tons..... | 5,182 | 5,735 | 1,634 | 1,025 |
| Flour, bbls..... | 321,044 | 188,461 | 164,054 | 83,415 |

BUFFALO—Reported by F. Howard Mason, secretary of the Chamber of Commerce.

| Articles. | Receipts. | | Shipments. | |
|----------------------------|-----------|-----------|------------|-------|
| | 1905. | 1904. | 1905. | 1904. |
| Wheat, bushels..... | 7,703,158 | 5,019,457 | ..... | ..... |
| Corn, bushels..... | 1,193,678 | 1,976,902 | ..... | ..... |
| Oats, bushels..... | 2,404,100 | 3,585,419 | ..... | ..... |
| Barley, bushels..... | 3,553,227 | 4,195,829 | ..... | ..... |
| Rye, bushels..... | 119,500 | 414,227 | ..... | ..... |
| Timothy Seed, lbs..... | ..... | ..... | ..... | ..... |
| Clover Seed, lbs..... | ..... | ..... | ..... | ..... |
| Other Grass Seed, lbs..... | ..... | ..... | ..... | ..... |
| Flax Seed, bushels..... | 2,092,742 | 1,727,677 | ..... | ..... |
| Broom Corn, lbs..... | ..... | ..... | ..... | ..... |
| Hay, tons..... | ..... | ..... | ..... | ..... |
| Flour, bbls..... | ..... | ..... | ..... | ..... |

CHICAGO—Reported by Geo. F. Stone, secretary of the Board of Trade.

| Articles. | Receipts. | | Shipments. | |
|----------------------------|-----------|-----------|------------|-----------|
| | 1905. | 1904. | 1905. | 1904. |
| Wheat, bushels..... | 4,884,780 | 2,685,345 | 1,587,106 | 2,753,863 |
| Corn, bushels..... | 7,970,038 | 7,436,500 | 4,878,024 | 4,190,651 |
| Oats, bushels..... | 9,327,088 | 7,436,421 | 4,850,053 | 4,068,078 |
| Barley, bushels..... | 4,466,748 | 2,914,160 | 1,567,369 | 1,126,245 |
| Rye, bushels..... | 138,102 | 200,881 | 106,131 | 378,978 |
| Timothy Seed, lbs..... | 2,560,326 | 3,300,938 | 1,067,525 | 704,335 |
| Clover Seed, lbs..... | 953,341 | 800,883 | 199,611 | 228,757 |
| Other Grass Seed, lbs..... | 1,854,480 | 1,134,719 | 2,675,633 | 1,018,549 |
| Flax Seed, bushels..... | 578,941 | 311,904 | 3,323 | 15,914 |
| Broom Corn, lbs..... | 2,496,492 | 1,892,812 | 1,092,575 | 658,079 |
| Hay, tons..... | 16,918 | 25,382 | 1,023 | 1,138 |
| Flour, bbls..... | 879,690 | 724,530 | 852,414 | 555,181 |

CINCINNATI—Reported by C. B. Murray, superintendent of the Chamber of Commerce.

| Articles. | Receipts. | | Shipments. | |
|-----------------------------|-----------|---------|------------|---------|
| | 1905. | 1904. | 1905. | 1904. |
| Wheat, bushels..... | 211,469 | 175,274 | 255,166 | 138,621 |
| Corn, bushels..... | 1,070,028 | 490,402 | 196,506 | 189,506 |
| Oats, bushels..... | 839,315 | 367,637 | 584,975 | 160,383 |
| Barley, bushels..... | 197,020 | 101,340 | 51,082 | 8 |
| Rye, bushels..... | 106,750 | 79,568 | 12,522 | 11,287 |
| Timothy Seed, bags..... | 1,331 | 5,890 | 1,752 | 1,227 |
| Clover Seed, bags..... | 2,255 | 1,660 | 459 | 415 |
| Other Grass Seed, bags..... | 7,823 | 10,068 | 7,084 | 7,264 |
| Flax Seed, bushels..... | ..... | ..... | ..... | 750 |
| Broom Corn, lbs..... | ..... | ..... | ..... | ..... |
| Hay, tons..... | 12,502 | 6,219 | 7,898 | 4,169 |
| Flour, bbls..... | 122,300 | 143,823 | 76,415 | 93,712 |

CLEVELAND—Reported by M. A. Havens, secretary of the Chamber of Commerce.

| Articles. | Receipts. | | Shipments. | |
|---------------------------------|-----------|---------|------------|---------|
| | 1905. | 1904. | 1905. | 1904. |
| Wheat, bushels..... | 66,128 | 96,073 | 90,789 | 17,606 |
| Corn, bushels..... | 1,201,908 | 500,156 | 597,454 | 323,798 |
| Oats, bushels..... | 772,174 | 843,427 | 381,594 | 245,981 |
| Barley, bushels..... | 17,220 | 33,581 | 600 | ..... |
| Rye, bu. and other cereals..... | 1,480 | 890 | ..... | 750 |
| Flaxseed, bushels..... | ..... | ..... | ..... | ..... |
| Hay, tons..... | 6,400 | 3,526 | 1,115 | 1,152 |
| Flour, bbls..... | 6,662 | 6,749 | 2,168 | 2,381 |

DETROIT—Reported by F. W. Waring, secretary of the Board of Trade.

| Articles. | Receipts. | | Shipments. | |
|----------------------|-----------|---------|------------|---------|
| | 1905. | 1904. | 1905. | 1904. |
| Wheat, bushels..... | 300,502 | 290,342 | 49,072 | 26,550 |
| Corn, bushels..... | 511,716 | 291,303 | 321,869 | 106,959 |
| Oats, bushels..... | 333,647 | 307,671 | 51,004 | 86,528 |
| Barley, bushels..... | 392,745 | 352,486 | ..... | 10,789 |
| Rye, bushels..... | 122,018 | 21,861 | 60,733 | 43,748 |
| Flour, bbls..... | 25,500 | 27,000 | 14,200 | 14,800 |

DULUTH—Reported by H. B. Moore, secretary of the Board of Trade.

| Articles. | Receipts. | | Shipments. | |
|-------------------------|-----------|-----------|------------|-----------|
| | 1905. | 1904. | 1905. | 1904. |
| Wheat, bushels..... | 9,392,034 | 5,317,514 | 5,759,017 | 5,267,699 |
| Corn, bushels..... | 1,369,757 | 1,422,724 | 524,358 | 1,730,142 |
| Oats, bushels..... | 1,675,200 | 1,722,005 | 1,470,313 | 2,349,252 |
| Barley, bushels..... | 92,827 | 290,485 | 111,068 | 188,512 |
| Flax Seed, bushels..... | 3,192,354 | 5,441,438 | 4,575,958 | 3,218,118 |
| Flour, bbls..... | 941,595 | 607,795 | 981,255 | 744,950 |

GALVESTON—Reported by C. McD. Robinson, chief inspector of the Cotton Exchange and Board of Trade.

| Articles. | Receipts. | | Shipments. | |
|---------------------|-----------|-------|------------|---------|
| | 1905. | 1904. | 1905. | 1904. |
| Wheat, bushels..... | | | 715,040 | ..... |
| Corn, bushels..... | | | 1,028,132 | 255,960 |
| Rye, bushels..... | | | | |

KANSAS CITY—Reported by E. D. Bigelow, secretary of the Board of Trade.

| Articles. | Receipts. | | Shipments. | |
|-------------------------|-----------|-----------|------------|-----------|
| | 1905. | 1904. | 1905. | 1904. |
| Wheat, bushels..... | 3,082,000 | 3,225,000 | 2,875,000 | 2,416,500 |
| Corn, bushels..... | 2,655,000 | 758,700 | 1,569,000 | 429,300 |
| Oats, bushels..... | 621,000 | 632,400 | 508,500 | 439,200 |
| Barley, bushels..... | 179,000 | 49,000 | 171,000 | 1,400 |
| Rye, bushels..... | 60,000 | 32,300 | 18,000 | 12,300 |
| Bran, tons..... | 1,020 | 945 | 5,370 | 4,905 |
| Flax Seed, bushels..... | ..... | 4,000 | ..... | 1,600 |
| Hay, tons..... | 11,620 | 12,800 | 2,420 | 3,370 |
| Flour, bbls..... | ..... | 148,600 | 126,200 | ..... |

MILWAUKEE—Reported by Wm. J. Langson, secretary of the Chamber of Commerce.

| Articles. | Receipts. | | Shipments. | |
|-------------------------|-----------|-----------|------------|-----------|
| | 1905. | 1904. | 1905. | 1904. |
| Wheat, bushels..... | 976,900 | 949,066 | 233,249 | 190,114 |
| Corn, bushels..... | 242,750 | 148,200 | 80,000 | 56,360 |
| Oats, bushels..... | 1,086,300 | 566,700 | 1,047,854 | 504,319 |
| Barley, bushels..... | 3,068,200 | 2,293,000 | 1,704,425 | 1,704,425 |
| Rye, bushels..... | 155,400 | 165,200 | 68,450 | 118,975 |
| Timothy Seed, lbs..... | 204,265 | 182,840 | 218,935 | 222,000 |
| Clover Seed, lbs..... | 644,341 | 600,993 | 196,990 | 166,725 |
| Flax Seed, bushels..... | 69,960 | 28,800 | ..... | ..... |
| Hay, tons..... | 1,720 | 2,218 | ..... | 57 |
| Flour, bbls..... | 408,925 | 433,025 | 535,665 | 382,469 |
| Feed, tons..... | ..... | ..... | ..... | ..... |

MINNEAPOLIS—Reported by L. T. Jamme, secretary of the Chamber of Commerce.

| Articles. | Receipts. | | Shipments. | |
|-------------------------|------------|------------|------------|-----------|
| | 1905. | 1904. | 1905. | 1904. |
| Wheat, bushels..... | 13,306,950 | 14,220,560 | 1,995,350 | 2,076,790 |
| Corn, bushels..... | 192,650 | 248,260 | 25,060 | 14,610 |
| Oats, bushels..... | 3,274,790 | 2,146,220 | 344,770 | 940,770 |
| Barley, bushels..... | 2,061,890 | 1,687,810 | 830,000 | 1,132,910 |
| Rye, bushels..... | 321,260 | 279,910 | 128,360 | 253,050 |
| Flax Seed, bushels..... | 2,057,080 | 1,856,380 | 521,140 | 686,360 |
| Hay, tons..... | 3,050 | 3,811 | 180 | 251 |
| Flour, bbls..... | 22,317 | 25,949 | 1,760,866 | 1,398,439 |

MONTREAL—Reported by George Hadrill, secretary of the Board of Trade.

| Articles. | Receipts. | | Shipments. | |
|------------------------|-----------|-----------|------------|-----------|
| | 1905. | 1904. | 1905. | 1904. |
| Wheat, bushels..... | 3,916,644 | 2,296,326 | 3,779,528 | 1,006,969 |
| Corn, bushels..... | 171,004 | 146,698 | 328,271 | 212,017 |
| Oats, bushels..... | 205,555 | 138,070 | 244,681 | 56,314 |
| Barley, bushels..... | 547,383 | 425,317 | 713,057 | 435,541 |
| Rye, bushels..... | ..... | ..... | ..... | ..... |
| Flaxseed, bushels..... | 408,609 | 1,490 | 270,455 | ..... |
| Flour, barrels..... | 136,975 | 113,678 | 277,434 | 253,594 |

NEW ORLEANS—Reported by Fred Muller, secretary of the Board of Trade.

| Articles. | Receipts. | | Shipments. | |
|-------------------------|-----------|---------|------------|-----------|
| | 1905. | 1904. | 1905. | 1904. |
| Wheat, bushels..... | 94,000 | 3,600 | 105,500 | 3,000 |
| Corn, bushels..... | 687,000 | 370,700 | 612,336 | 1,442,621 |
| Oats, bushels..... | 431,000 | 74,000 | 372,438 | 12,400 |
| Barley, bushels..... | 122,000 | ..... | 140,000 | ..... |
| Rough rice..... | ..... | ..... | ..... | ..... |
| Clean rice pockets..... | 80,737 | 53,252 | 108,679 | ..... |
| Hay, tons..... | ..... | ..... | ..... | ..... |
| Flour, bbls..... | 60,984 | 59,553 | 145,359 | 30,043 |

OMAHA—Reported by A. H. Merchant, secretary of the Grain Exchange.

| Articles. | Receipts. | | Shipments. | |
|-----------------|-----------|---------|------------|---------|
| | 1905. | 1904. | 1905. | 1904. |
| Wheat, bu..... | 1,894,400 | 475,000 | 1,072,000 | 350,000 |
| Corn, bu..... | 514,800 | 346,000 | 373,000 | 350,000 |
| Oats, bu..... | 1,056,000 | 426,000 | 954,000 | 406,000 |
| Barley, bu..... | 45,000 | 47,000 | 19,000 | 17,800 |
| Rye, bu..... | 65,000 | 54,000 | 24,000 | 91,000 |

PEORIA—Reported by R. C. Grier, secretary of the Board of Trade.

| Articles. | Receipts. | | Shipments. | |
|--------------------------------|-----------|-----------|------------|-----------|
| | 1905. | 1904. | 1905. | 1904. |
| Wheat, bushels..... | 54,400 | 38,400 | 23,200 | 53,200 |
| Corn, bushels..... | 2,077,000 | 2,833,000 | 1,437,000 | 1,293,000 |
| Oats, bushels..... | 764,400 | 677,300 | 648,300 | 927,400 |
| Barley, bushels..... | 380,300 | 346,500 | 284,900 | 244,500 |
| Rye, bushels..... | 26,400 | 41,600 | 4,800 | 32,800 |
| Mill Feed, tons..... | 1,380 | 950 | 4,389 | 4,424 |
| Spirits and Liquors, bbls..... | ..... | ..... | ..... | ..... |
| Syrups and Glucose, bbls..... | ..... | ..... | ..... | ..... |
| Seeds, lbs..... | 30,000 | 90,000 | 60,000 | 60,000 |
| Broom Corn, lbs..... | 75,000 | 750,000 | 135,000 | 1,065,000 |
| Hay, tons..... | 2,100 | 4,070 | 360 | 1,010 |
| Flour, bbls..... | 163,600 | 89,700 | 121,805 | 63,000 |

PHILADELPHIA—Reported by L. J. Logan, secretary of the Commercial Exchange.

| Articles. | Receipts. | | Shipments. | |
|-------------------------|-----------|---------|------------|--------|
| | 1905. | 1904. | 1905. | 1904. |
| Wheat, bushels..... | 597,176 | 76,380 | 221,000 | ..... |
| Corn, bushels..... | 977,356 | 579,658 | 462,853 | 94,285 |
| Oats, bushels..... | 1,990,206 | 418,216 | 1,895,965 | ..... |
| Barley, bushels..... | 74,400 | 101,600 | ..... | ..... |
| Rye, bushels..... | 8,000 | 13,600 | ..... | ..... |
| Timothy Seed, bags..... | 170 | ..... | ..... | ..... |
| Clover Seed, bags..... | 275 | 1,029 | ..... | ..... |
| Flax Seed, bushels..... | 60,000 | 87,300 | ..... | ..... |
| Hay, tons..... | 8,390 | 7,800 | ..... | ..... |
| Flour, bbls..... | 342,370 | 191,243 | 182,893 | 54,092 |

ST. LOUIS—Reported by Geo. H. Morgan, secretary of the Merchants' Exchange.

| Articles. | Receipts. | | Shipments. | |
|---------------------|-----------|-----------|------------|-----------|
| | 1905. | 1904. | 1905. | 1904. |
| Wheat, bushels..... | 1,651,100 | 1,571,400 | 1,366,255 | 1,535,770 |
| sacks..... | 16,619 | 10,102 | 2,676 | 950 |
| Corn, bushels..... | 1,069,000 | 910,800 | 1,041,820 | 762,410 |
| sacks..... | 24,866 | 5,722 | 16,250 | 1,250 |
| Oats, bushels..... | 1,645,650 | 1,016,550 | 1,465,160 | 788,800 |
| sacks..... | 23,350 | ..... | 23,350 | |

ELEVATOR AND GRAIN NEWS

ILLINOIS.

The Zorn Grain Co. of Lilly, Ill., has started its new elevator.

R. F. Cummings of Clifton is building an elevator at Pittwood, Ill.

Wilton & Rigsby, grain dealers of Chesterville, Ill., have dissolved.

The Cropsey Elevator Co., Cropsey, Ill., has completed its new elevator.

William Murray of Ludlow, Ill., has installed a Columbus Gasoline Engine.

The Sidney Grain Co. of Sidney, Ill., has installed a Columbus Gasoline Engine.

James F. Umpleby will erect an elevator at Dollville, Ill. (Tower Hill P. O.).

It is reported that Herman & Ludwig at Secor, Ill., have sold their grain business.

Cram Bros. have purchased an interest in the Shannon Grain Co. at Shannon, Ill.

Elmore & Lemmon have purchased the small elevator at Pegram, Ill., from C. J. Lumpkin.

The Mt. Pulaski Grain Co. has certified to an increase of capital stock from \$30,000 to \$50,000.

The Howe Scale Co. of Chicago, Ill., has shipped to the H. G. Truby Grain Co., Andrea, Ill., some large hopper scales.

The Farmers' Elevator Co. at Assumption, Ill., has been incorporated with a capital of \$10,000 to deal in feed and fuel.

W. H. Beckstein of Mokena, Ill., has sold his elevator and entire business to Liess Brothers. The price paid was \$6,500.

Truby & Co.'s elevator at Andres, Ill., is nearing completion. C. J. Meyers, the grain dealer at the same town, is ready for business.

Farmers of Lowder, Ill., have organized and incorporated the Lowder Elevator and Supply Co. and are erecting a \$6,000 elevator.

The new elevator built by New & New, at Tomlinson, Ill., is in working order and has taken in considerable quantities of new corn.

The Farmers' Elevator Co., recently incorporated at Virden, Ill., has purchased the elevator of Chafin & Alderson and has begun business.

It is rumored that elevators at Mt. Pulaski, Broadwell, Lincoln and Lawndale, Ill., may be merged under one head and operated as a farmers' enterprise.

The Cleveland Grain Co. of Cleveland, Ohio, is building a 20,000-bushel elevator at Sheldon, Ill. The Burrell Engineering and Construction Co. has the contract.

The Morrisonville Grain Co., Morrisonville, Ill., has been incorporated with a capital stock of \$10,000. The incorporators are I. W. Hardy, A. L. Kitchell and Louis Rittger.

Elmore & Lemmon have completed new additions on their elevators at Pleasant Hill, Ill., and at Hill View, Ill. The work was done by the Burrell Engineering and Construction Co.

The Atchison, Topeka & Santa Fe has completed plans for the construction of a new grain elevator at Chicago. It will have a capacity of 1,000,000 bushels and will cost about \$600,000.

J. E. Hawthorne, Bloomington, Ill., is completing an addition to his Colfax, Ill., elevator, with additional capacity for 35,000 bushels of shelled corn or oats. He has also installed a McLeod Automatic Weigher.

The Burrell Engineering and Construction Co. is installing a 25-horsepower gasoline engine in the elevator at Rankin, Ill., owned by Rankin & Whitman, and is covering the building with a galvanized iron roof.

Baker & Jones Co. has secured a site from the I. I. & M. Railway Co. for a grain elevator at Manhattan, Ill. The old elevator at the Wabash grounds will be taken away, also the coal sheds and office, and new ones built.

Frank Supple has completed a deal for the purchase of the elevator at Ogden, Ill., formerly owned by the Ogden Grain Co., of which Freese Bros. were the principal stockholders. The elevator has a capacity of about 100,000 bushels.

T. A. Bone of Decatur, Ill., has purchased a half interest in the W. S. Smith elevators at Prairie Hall. Mr. Bone will have charge of these elevators and expects to be able to handle a large quantity

of grain at this point. Mr. Smith recently bought the Boyce Elevator at Mt. Zion.

T. E. Kelly of Galva, Ill., has purchased the Dewey Elevator at Mazon, Ill. It has a capacity of about 100,000 bushels, and is situated in a rich farming country. Mr. Kelly has been in the grain business in Galva for thirteen years.

A. R. Scott & Co., who lost their 60,000-bushel grain elevator at Bethany, Ill., by fire on November 8, just two days before it was finished, have placed their contract with the Burrell Engineering and Construction Co. for a new elevator.

The Turner-Hudnut Co. will construct another steel grain tank at its elevator at Pekin, Ill. The capacity of the elevator will be largely increased by the addition of the new tank, which makes the third one put up by the company at this point.

WESTERN.

The Farmers' Elevator Co. is erecting a warehouse at Marysville, Idaho.

E. R. Miller at Florence, Colo., has sold his grain, feed and coal business to Brown & Son of Denver, Colo.

Borden & Selleck Co., Chicago, has just installed a large Howe Gasoline Engine for August Nissen, Broomfield, Colo.

The Renfrow Grain and Fuel Co. at Renfrow, Okla., has been incorporated with a capital stock of \$10,000. The incorporators are L. A. Rowan, A. Arterburn and C. I. Renner.

The Bozeman Elevator Company has its new elevator completed at Bozeman, Mont. It is practically fireproof and will hold about 78,000 bushels. Mr. F. W. Bull is secretary and treasurer.

Balfour, Guthrie & Co. of Seattle, Wash., will erect two new elevators on account of enormous increase of business. They will be erected either at Smith's Cove or West Seattle, Wash., according to plans of the company at the present time.

Colonel A. L. Babcock is at the head of a company that is planning to erect a chain of elevators throughout the Yellowstone Valley. An elevator with a capacity of 30,000 bushels has just been completed at Fromberg, and at Billings a steel elevator with a capacity of 150,000 bushels will be erected.

At a recent meeting of business men at Livingston, Mont., Messrs. Hall and Kane of Bozeman, Mont., were present and submitted a plan for a 75,000-bushel elevator, which will cost \$12,000. From the interest manifested by the business and ranch men it is likely that the building will be erected this spring.

EASTERN.

Peter Mollahan & Co., grain dealers of Lowell, Mass., have resumed business.

Frank E. Brooks has completed his new elevator at South Framingham, Mass.

S. D. Keeler of Ridgefield, Conn., has purchased the Ridgefield Elevator of Geo. I. Abbott.

The Marsh Coal and Grain Co. has built a 9,000-bushel grain elevator at Concord, N. H.

A grain elevator is being installed in the feed store of Conklin & Cummins at Goshen, N. Y.

The Shea Grain Co., New London, Conn., is building a new shed as an addition to its present quarters.

W. P. Pierson is erecting an addition to the building now used by him as a warehouse and feed mill at Sunwood, N. Y.

The elevator being erected by the Messrs. Diehl at Lancaster, Pa., to replace the structure that was burned last June, is almost completed.

Holmes, Keeler & Selleck Co., Norwalk, Conn., have their new grain elevator in running order. They have modern machinery for handling grain.

The Automatic Transfer Co., Buffalo, N. Y., has been incorporated with a capital stock of \$10,000 by A. W. Lytle, M. E. Sullivan and N. M. Redfield.

Seth Reed of Amherst, Mass., has sold his grain business to J. E. Merrick and R. B. Howlett. The firm name will be J. E. Merrick & Co., with Mr. Howlett as manager.

G. N. Bartemus has purchased the one-third interest of the estate of John F. Moseley in the wholesale grain business of Geo. N. Bartemus & Co. at Concord, N. H.

The Berkley Heights Lumber and Supply Co., Plainfield, N. J., has been incorporated with a capital of \$10,000. The incorporators are W. H. Rogers, W. Jeffery and S. H. Craig.

The Jaqui Co. of Morristown, N. J., has sold its grain and feed business to a syndicate of New York capitalists, who have reorganized the business and incorporated as the Jaqui Co., with a capital stock of \$50,000. The incorporators are E. A. Allen, D. B. Kennedy, New York City; J. H. Carpenter and

E. A. Carpenter, East Orange, N. J. The sale includes the mill and elevator on the Lackawanna Railroad and the price is reported as being about \$50,000.

John J. Lappin & Co. have been incorporated at Portland, Me., with a capital stock of \$30,000, of which \$300 is paid in. They will deal in grain, mill feeds, baled hay and straw. H. H. Lappin is treasurer.

Safe blowers made a raid on Weeks & Thomas' grain and feed store at Middlebury, Vt., recently and blew open the safe. There was no money in the safe at the time, only a few books, which were partially destroyed.

The Potter Grain Co., Gardiner, Mass., which is a branch of the W. N. Potter & Sons Co. of Greenfield, Mass., has completed its building. The structure is 13½ feet long, 60 feet wide and two stories high, with a 65-foot elevator.

Grand Trunk Elevator No. 2 at Portland, Me., was opened on November 27, after being closed since last March. This house has a capacity of 1,500,000 bushels. Business started out with a rush, there being three steamships in port.

CANADIAN.

The new grain elevator at Lefroy, Ont., is now complete.

A new elevator has been built for John Lineham at Millet, Alberta.

A large warehouse has been built at Ritchie's Mill, Strathcona, Alberta.

The Northern Elevator Co. are building a new elevator at Forget, Saskatchewan.

The Alberta Grain Co. has completed a 50,000-bushel elevator at Edmonton, Alberta.

The Alberta Pacific Elevator Co. has purchased the farmers' elevator at Carstairs, Man.

The Western Canada Elevator Co. have completed their elevator at Canora, Saskatchewan.

Demand of assignment has been made upon E. D. Paquette, a flour and grain merchant at Montreal, Que.

The new elevator of the Keewatin Flour Mills Co. at Keewatin, Ont., when completed, will be about 90 feet high.

C. F. Fortune, flour and feed merchant, Vancouver, B. C., has been succeeded by Hollingshead & McDougall.

J. McLeod and C. Blachford have registered under the style of McLeod & Blachford, hay and grain merchants, Montreal, Que.

J. K. McInnis & Sons have disposed of their interests in the flour mill and elevator at Regina, Saskatchewan, to A. T. Hunter.

The Hall, McNab Grain Co. of Winnipeg is erecting a grain elevator at Vancouver. It is to be completed some time in January.

The Halifax Grain Elevator of Halifax, N. S., which has been idle since it was built, six years ago, is now in operation. Arrangements have been made for the regular shipping of grain from this port.

The Red Deer Flour Milling and Elevator Co. is arranging to erect a flour mill and elevator at Red Deer, Alta., at a cost of \$40,000. The company will also build a 40,000-bushel elevator at Edmonton, Alta. M. McDonald is president of the company.

THE DAKOTAS.

A new elevator will be built at Jamestown, N. D.

A new elevator is being built at Rock Lake, N. D.

S. J. Simonson will erect an elevator at Driscoll, N. D.

A. M. Grant is building an elevator at Hurd, N. D.

The Acme Elevator is now open for business at Buxton, N. D.

The Monarch Elevator at Jamestown, N. D., is now complete.

A farmers' elevator company has been organized at York, N. D.

A new 40,000-bushel elevator is being built at Bartlett, N. D.

A 30,000-bushel elevator will be constructed at Parkhurst, N. D.

J. C. Hallum will erect an elevator next year at Driscoll, N. D.

There is some talk of a farmers' elevator at Hankinson, N. D.

The Koenig Elevator is now ready for business at Washburn, N. D.

Two elevators are to be built at Derrick, N. D., and one at Weaver.

McGee & Smith will erect a 30,000-bushel elevator at Hope, N. D.

The Ashley Elevator Co. has been incorporated with a capital of \$5,000 at Ashley, N. D. The

incorporators are C. C. Hammond, J. J. Giedt and Mary J. Giedt.

The Hawkeye Elevator Co. of Yankton, S. D., is now open for business.

The Spalding Elevator Co. is building an elevator at Rollette, N. D.

C. E. Knox has purchased the Blankenburg Elevator at Oakes, N. D.

St. Anthony and Dakota Co. will build an elevator at Des Lacs, N. D.

The Lake Preston Milling Co. has erected an elevator at Harrold, S. D.

The Powers Elevator Co. has put in elevators at Alfred and Gackle, N. D.

The Sullivan elevator of Peever, S. D., was sold to J. A. McKeever of Sisseton, S. D.

The Woodworth Elevator Co. is building an addition to the house at Flaxton, N. D.

Charles Bremer is building a flour house in addition to his elevator at Bemis, S. D.

Farmers at Sharon, N. D., have organized a company and are building a grain warehouse.

Messrs. Will and Henry Kraling were looking up a location for an elevator at Tagus, N. D.

The Occident Elevator Co. at Jamestown, N. D., will erect a 35,000-bushel house next season.

The Ireys Elevator at Martin, N. D., is being enlarged by an addition with a capacity of 7,000 bushels.

Frank Lynch of Casselton, N. D., will erect an elevator at Pickert Siding, near Finley, N. D.

The Farmers' Co-operative Co. of Baltic, S. D., has purchased another elevator at this point.

G. O. Helvig of Dawson, Minn., has begun the erection of a grain elevator at Millbank, S. D.

The Eagle Roller Mill Co. will erect a 30,000-bushel elevator next spring at Frankfort, S. D.

The St. Anthony and Dakota Elevator is now complete and doing business at Wheelock, N. D.

An elevator will be built this spring at Anamoose, N. D., with a capacity of 20,000 bushels.

The farmers in the vicinity of Buffalo Lake, N. D., are talking of building an elevator there.

The Grain Producers' Elevator Co. has decided to build a 40,000-bushel elevator at Bartlett, N. D.

The Carlon & Beardsley, Floete & Chesley and King elevators of Corsicana, S. D., are completed.

H. C. Webb of Deering, N. D., has disposed of his elevator at that place and gone out of business.

The Alliance Elevator at Valley City, N. D., has been turned over to the Russell-Miller Milling Co.

The Cargill Robb Elevator Co. at Kenmare, N. D., have built two large bins of 30,000 bushels' capacity.

Messrs. Marshall & McCartney will build an elevator of about 30,000 bushels' capacity at Fullerton, N. D.

The Woodworth Elevator Co. has erected a large storage building adjoining its elevator at Cathay, N. D.

John Taylor's elevator at Berthold, N. D., is open for business. It has a capacity for about 35,000 bushels.

Regan & Lyness at Fessenden, N. D., are building an addition to their elevator with a capacity of 35,000 bushels.

The Eureka Roller Mills, Eureka, S. D., write us that they are desirous of building an elevator, as their former house collapsed.

The Royal Elevator Co. of Fessenden, N. D., has erected an addition to its elevator with a capacity of 12,000 bushels.

J. P. Huber purchased from Schmidt & Gulack of Anamoose, N. D., their elevator, known as the Gesche Elevator, for \$2,000.

The capacity of the Woodworth Elevator Co. of Carpio, N. D., has been increased by the addition of a 15,000-bushel flat house.

Each of the five elevators at Wimbleton, N. D., is building a large addition, increasing their total capacity about 100,000 bushels.

A new elevator will be built by the Powers Elevator Co. at Cleveland, N. D., with a capacity of from 40,000 to 50,000 bushels.

The Pickert Farmers' Elevator Co. has been organized to build an elevator at Pickert Siding, N. D. W. W. Archer is secretary.

The Herreid Milling Co. has commenced the erection of an elevator at Herreid, S. D. The elevator will have a capacity of 30,000 bushels.

A warehouse has been moved from Washburn, N. D., to Turtle Lake, N. D., a distance of 25 miles. The house will be occupied by the newly organized Turtle Lake Grain Co., composed of

Keim Bros. of Turtle Lake and Wenzel & Schumaker of Underwood, N. D.

The Twin City Elevator Co. of Minneapolis, Minn., has rebuilt the elevator at Tagus, N. D., which was destroyed on account of poor foundation.

The Minneapolis and Northern Elevator Co. of Hillsboro, N. D., is having one of its warehouses overhauled and will establish a flour and feed business.

The Grain Producers' Elevator Co. will build a 40,000-bushel elevator at Bartlett, N. D., in the spring. W. C. Fairbanks is secretary and treasurer.

An elevator is being built at Ray, N. D., to take the place of the one that was recently burned. It is stated that two more will be constructed in the spring.

Work on the flat house in course of erection at Galesburg, N. D., by the Minneapolis & Northwestern Elevator Co. has been stopped by the railroad company, but it is hoped to get a permit for its construction.

Both the Farmers' Elevator Co. and S. S. Renfrew have built large wheat bins adjoining their elevators at Harvey, N. D. The building of these bins will increase the capacity from 50,000 to 60,000 bushels.

Correcting a notice of B. S. Snyder of Anamoose, N. D., the Western Grain and Fuel Company of Anamoose write us as follows: "B. S. Snyder of Anamoose, N. D., built a temporary warehouse at Denhoff, N. D., to take care of the business this fall. Later he will build a 25,000-bushel elevator at that point."

SOUTHERN AND SOUTHWESTERN.

W. P. Wells is building a 10,000-bushel elevator at Pawhuska, Okla.

The Port Chalmette Elevator at Port Chalmette, New Orleans, has resumed operations.

The Western Grain Co. at Fort Smith, Ark., has incorporated with a capital stock of \$50,000.

Work on the new grain drier in connection with Elevator A, at Newport News, Va., is nearing completion.

O. R. Cureton of Georgia is expecting to build a 20,000-bushel elevator to cost \$5,000 at Wagoner, Okla.

It is reported that Bennett & Patterson at Skiatook, I. T., have been succeeded by the Cherokee Mill & Elevator Co.

A warehouse, elevator and milling company has been organized at Dickson, Tenn., with a proposed capital stock of \$15,000.

A new grain elevator that will cost from \$150,000 to \$200,000 will be built at Louisville, Ky. There are four elevators of large capacity in that city now.

It is rumored that a wholesale grain and feed supply house is to be erected at Pratt City, Tenn., in the near future. The proposed building is to cost about \$12,000.

Merchants' Feed Co. has been incorporated at Mt. Hope, W. Va., with a capital stock of \$5,000. The incorporators are F. M. Bailey, C. Moseley, A. D. Mosley and J. E. Lewis.

The Canton Grain Co. has been incorporated at Canton, Okla., with capital stock of \$5,000. The directors are C. D. Boardman, Edward Broom of Okeene, and H. A. Hanley, Canton.

After lying practically idle for the past three years on account of the poor condition of the corn crops, the Norfolk & Western Elevator at Norfolk, Va., will resume operations.

The Renfrow Grain & Fuel Co., at Renfrow, Okla., has been incorporated with a capital stock of \$10,000. The incorporators are L. A. Rowan, A. Arterburn, C. I. Renner, J. P. Williams and D. Williamson.

The Yukon Mill & Elevator Co. at Yukon, Okla., will let the contract for an all-steel elevator and a battery of six storage tanks, work to commence in the spring. The tanks are to have a capacity of 50,000 bushels of grain.

It is reported from Wheeling, W. Va., that the Guyan Valley Fuel Co. has bought from the Collins & Hartwig Co. of Cincinnati, Ohio, two towboats and over 100 barges. The Guyan Co. will build a corn elevator at North Bend.

Grayson Mill & Grain Co. of Van Alstyne, Texas, has been incorporated with \$20,000 capital stock by J. A. McKinney, J. H. Marr, J. Hie McKinney, Otis C. Cartwright and R. S. Fulton.

The Brackett-Wallace Mill & Grain Co. of Sherman, one of the best-known milling and grain firms in Texas, which was placed in the hands of a receiver in June last, has adjusted its affairs and its properties have been restored to its own-

ers' management. Business has been resumed, and the plant is now in operation. The personnel of the company remains unchanged, and W. O. Brackett has been re-elected president and general manager.

OHIO, INDIANA AND MICHIGAN.

H. Peebles & Son of Whiteville, Ohio, are putting in new scales.

C. C. Well's new elevator at Scottsburg, Ind., is now in operation.

Fall & Alter have sold their elevator at Darlington, Ind., for \$6,000.

M. Hobbs and James Holliday will build an elevator at Hobbs, Ind.

Loughry Bros., Idaville, Ind., are handling grain at their new elevator.

Daniel Carrigan will conduct a feed and grain store at North End, Mich.

R. S. Drew will erect a grain elevator at Empire, Mich., for next season's trade.

D. L. Leas is building an office room near his grain elevator at Waterloo, Ind.

J. C. Baugh has been making some improvements in his elevator at Clarksville, Ohio.

A. H. House of Gladwin, Mich., has commenced the work of rebuilding his elevator.

Chamberlain Bros. of North Lewisburg, Ohio, are reported to have traded their elevator.

Dewey Bros., Springfield, Ohio, are about to move their grain elevator to a new location.

The Fowler Elevator Co. has been organized at Fowler, Mich., with about 75 subscribers.

Bernard H. Wess will erect an elevator that will cost about \$10,000 at Cincinnati, Ohio.

The Goodrich Bros. Hay and Grain Co. is receiving grain at its new elevator in Winchester, Ind.

The Albion Milling Co. at Albion, Mich., has installed an electric motor to run its grain elevator.

Fred Rose of Brookston, Ind., has sold his elevator to Robert Bell and A. Hanson of Indianapolis.

The Central Elevator Co., Cleveland, Ohio, has changed its style to the Central Grain Elevator Co.

C. C. Wells of Scottsburg, Ind., is having a grain elevator built in connection with his feed exchange.

J. C. Shaeffer of Carroll, Ohio, contemplates making some changes in his elevator in the near future.

Felger Bros. of Middle Point, Ohio, who recently purchased Ireton Bros.' elevator, are doing a good business.

It is reported that Mr. Ross, of Wilkinson & Ross, Brookston, Ind., has sold his interest in the grain business.

Dr. Frank P. Lyons has disposed of his interest in the U. W. Blue & Co. Elevator at Flora, Ind., to J. Brower.

L. R. Dunlap will erect an elevator at Covington, Ind., with a capacity of from 30,000 to 50,000 bushels of grain.

F. E. Nowlin has leased the Lake Shore Grain Elevator at Albion, Mich., and has it equipped with machinery for handling beans.

When the new elevator being built by I. L. Storms at Clarksville, Ind., is complete, there will be three elevators in this town.

Miller & Walker have purchased the D. S. Mosier Elevator at Flora, Ind. Bert Miller, formerly with Miller & Kern, will have charge.

O. Klepinger has sold his half interest in the grain elevator at Kessler Station, Ohio, to his partner, G. N. Falkner, for \$3,000.

The Business Men's Association of Fayette, Ohio, has raised money for the erection of an elevator. A Mr. Baker is promoting the deal.

The elevator at Hillsboro, Ind., owned by A. B. Cohee & Co. of Frankfort, Ind., has been sold to Morrison, Finch & Co., also of Frankfort.

Fairmont Grain Co., Fairmont, Ohio, has been incorporated with capital stock of \$5,000. The directors are J. J. Tyler, E. Elliott and C. T. Parker.

The Alter Grain Co. has incorporated at Darlington, Ind., with a capital stock of \$6,250. The directors are J. H. Stewart, Leslie Connarce and B. Price.

Samuel Nusbaum of Middlebury, Ind., has purchased a 14-horsepower Howe Gasoline Engine and hopper and wagon scales from Borden & Selleck Co., Chicago, Ill.

The McCardle Grain Co. of Indianapolis, Ind., has been incorporated with a capital stock of \$25,000. The directors are J. W. McCardle, James Hodge and C. A. McCardle.

Sneath & Cunningham have completed a 60,000-bushel transfer elevator at Tiffin, Ohio. It contains a No. 7 Monitor Clipper, a No. 9 Monitor Cleaner, one 1,600-bushel Fairbanks Hopper Scale and is

run by two 40-horsepower natural gas engines. The house was built by the Burrell Engineering and Construction Co.

The Myers Grain Co. of Lockbourne, Ohio, has been incorporated with a capital of \$10,000. The incorporators are J. G. Myers, C. M. Myers, W. M. Myers, Hilda Myers and Florence Myers.

Borden & Selleck Co., Cleveland, Ohio, have just sold a 44-horsepower Howe Gasoline Engine and outfit of scales to Beaverson & Hauser of Gibsonburg, Ohio, who are erecting an elevator and flour mill.

Work was commenced recently on a farmers' elevator at Quincy, Mich. The building committee is composed of A. J. Warner, C. H. Chase and H. P. Norton. Daniel Larzelere will have charge of elevator when completed.

C. T. Akin, E. W. Akin and J. T. Akin have sold the Carlisle Mill and Elevator Co. at Carlisle, Ind., of which C. Hoffman of Vincennes, Ind., was the principal stockholder. The new company will erect an elevator at a cost of \$5,000.

On the complaint of John Boles, I. A. Merchant was appointed receiver for the business of J. M. Neer, who has been conducting a grain elevator at Marion, Ohio. Mr. Boles, who is the father-in-law of Mr. Neer, took judgment on a cognovit note for \$1,500.

S. P. Albright of Arcanum, Ohio, and J. D. Albright of Columbus, Ind., trading as Albright & Son, and doing an elevator and general grain business at Gem, Ind., have filed a voluntary petition in bankruptcy. The firm has been out of business since last May.

IOWA.

T. A. Baird is erecting a new grain office at Newport, Iowa.

A farmers' elevator is now under construction at Rollin, Iowa.

G. E. Ridgeway is building an elevator at Plymouth, Iowa.

The elevator of Shugart & Ouren at Council Bluffs, Iowa, is now complete.

C. Tams and H. Hagge have purchased the Hennings Elevator at Ogden, Iowa.

The new elevator being erected at Prairieburg, Iowa, will be in operation soon.

L. H. Dammann at Bennett, Iowa, has purchased an elevator at New Liberty, Iowa.

There is some talk of the organization of a farmers' elevator at Toledo, Iowa.

The Wells-Hord Grain Co. of Calamus, Iowa, is erecting new corn cribs near its elevator.

The Iowa Elevator Co. has moved its office from Clarion, Iowa, to Eagle Grove, Iowa.

The Morton Grain Co. is installing a gasoline engine in its elevator at Percival, Iowa.

J. A. Sauer has purchased the elevator at Le Mars, Iowa, from the Omaha Railway.

Cooper & Van Dorn of Hancock, Iowa, are considering the erection of a \$15,000 elevator.

The elevator owned by Clint Sherbourn of Rose Hill, Iowa, has been sold to Thomas Beatty.

The Great Northern Elevator at Brede, Iowa, which was recently destroyed, will be rebuilt.

The Farmers' Mutual Elevator Co. has purchased the Schwarting Elevator at Walcott, Iowa.

It is reported that J. Hovelson and W. O. Nichols of Osage, Iowa, have consolidated as Hovelson & Nichols.

There is a rumor afloat that the Neola Elevator Co. has purchased the old White Elevator at Kenwood, Iowa.

A. H. Horstman has sold his grain, lumber and coal business at Reinbeck, Iowa, to a party from Princeton, Ill.

Work is progressing steadily on the farmers' elevator at Sloan, Iowa. The office and engine room are already completed.

The Wells-Hord Grain Co., Calamus, Iowa, has installed a large wagon scale purchased from Borden & Selleck Co., Chicago, Ill.

The Farmers' Co-operative Elevator Co. has been organized at Olaf, Iowa, with a capital stock of \$4,000. C. J. Baxter is secretary.

It is stated that the Rothschild Grain Co. of Davenport, Iowa, is looking over ground at Long Grove, Iowa, with a view to building an elevator.

A temporary organization has been formed by farmers in the vicinity of Kanawha, Iowa, for the purpose of raising money to build an elevator.

Van Dorn & Cooper have completed negotiations for the erection of a 50,000-bushel elevator at Council Bluffs, Iowa. This is the fourth elevator under construction at Council Bluffs this winter—the new Union Elevator of 1,200,000 bu. capacity and three of 50,000 bu. each, Droge Brothers, Shugart-Ouren Seed Co. and Van Dorn & Cooper. In addition to

this, the Worrall transfer elevator is being repaired and greatly enlarged, and negotiations are under way for a site for another 1,000,000-bushel plant.

J. A. Kyle sold his elevator and grain business at Shenandoah, Iowa, to Gwynn Bros. of Imogene, Iowa. The name of the new firm will be J. L. & J. K. Gwynn.

The Worrall Grain Co. has sold its grain elevator at Council Bluffs, Iowa, to the Nebraska Hay and Grain Co. of Omaha, Neb. This is a transfer house and handles from fifteen to twenty cars daily.

The Rock Island Elevator at Council Bluffs, Iowa, has been completed in record-breaking time. The contract called for the completion of an elevator, 48x46 in size, and 60 feet high, inside of twenty days; but the building was completed in fourteen days.

MISSOURI, KANSAS AND NEBRASKA.

Ashford Bros. will build an elevator at Homer, Neb.

A new elevator is being constructed at Nickerson, Neb.

Blenkiron Bros. are erecting an elevator at Oakland, Neb.

A farmers' elevator is being erected at Danbury, Neb.

Robert McLean will build an elevator at Pohocco, Neb.

The Duff Elevator Co. is building corn cribs at Bartley, Neb.

Bossemeyer Bros. are building an elevator at Webber, Neb.

The Cregg Elevator at Davenport, Neb., has a new Fairbanks Scale.

It is reported that Railsbach Bros. will erect an elevator at Ashland, Neb.

John Panzeram has purchased the Van Buren Elevator at Deshler, Neb.

The Wells-Hord Grain Co. is constructing an elevator at Richland, Neb.

It is reported that J. Falconer & Son at Belleville, Kan., have dissolved.

The McCaul-Webster Elevator Co. has completed its elevator at Fremont, Neb.

The Minden Grain Co. is building an addition to its elevator at Trenton, Neb.

The Farmers' Co-operative Society at Palmer, Neb., has purchased an elevator.

T. J. Malone & Sons are erecting a grain elevator at the new town of Enola, Neb.

Cooper & Linn of Humboldt, Neb., have purchased an elevator at Cambridge, Neb.

The Cargill Co. will erect an elevator with a capacity of 40,000 bushels at Oakland, Neb.

A movement is on foot among the farmers at Belleville, Mo., to establish a grain elevator.

The Hardy Roller Mills has completed its mill at Hardy, Neb. The town now has two mills.

It is reported that the Whiting-Finn Grain Co. will succeed the Finn Grain Co. of Sedgwick, Kan.

Black Bros. Milling Co. has purchased the elevator owned by the local grain company at Beatrice, Neb.

Butts & Son have sold their wholesale and retail grain business at Vandalia, Mo., to Lewellen & Chilton.

N. Whitnell of the Tarkio Roller Mills, Tarkio, Mo., wants to buy an elevator in Nebraska or Kansas.

The Nye-Schneider-Fowler Co. of Fremont, Neb., will build a 1,000,000-bushel grain elevator at Omaha, Neb.

The Omaha Elevator Co. is tearing down some of its cribs at Touhy, Neb., and moving them to Agnew, Neb.

It is reported that W. R. Robbins, at Bushton, Kan., has been succeeded by the Bushton Grain & Live Stock Co.

Merriam & Holmquist, Omaha, Neb., have just purchased three large hopper scales of Borden & Selleck Co., Chicago.

The Dawson Grain Co. of Omaha, Neb., has purchased the elevator of the Transmississippi Grain Co. at Linwood, Neb.

It is reported that the Marshall Milling & Elevator Co. at Marshall, Mo., has changed its name to M. H. Land Milling Co.

It is reported that the Farmers' Elevator Co. has bought the Marquardt & Binkman Elevator at Nebraska City, Neb., for \$7,000.

A. C. Gross & Co. contemplate making some improvements in the near future in the elevator recently purchased by them at Coy, Neb.

The Herndon Grain Association, which was incorporated October 6, 1905, at Herndon, Kan., with a capital stock of \$5,000, is building an elevator

with a capacity of 20,000 bushels. It will install an 18-horsepower Fairbanks-Morse Gasoline Engine. E. E. Schultz is secretary.

The Updike Grain Co., Omaha, Neb., has just installed some large Howe Hopper Scales, purchased from the Borden & Selleck Co., Chicago.

The Cargill Co. is building an elevator at Oakland, Neb. The building will be about 32x40 and 40 feet high, with a capacity of 40,000 bushels.

The Howe Scale Co., Chicago, has recently furnished the Farmers' Grain and Stock Co., Hildreth, Neb., with a 14-horsepower Howe Gasoline Engine.

The Sikes-McMullin Grain Co. of Sikeston, Mo., has been incorporated for \$10,000. The incorporators are C. F. McMullin, W. L. Carroll and J. E. Marshall.

The South Park Grain Co. at St. Joseph, Mo., has increased its capital stock from \$25,000 to \$50,000. It recently built a new elevator with a capacity of 100,000 bushels.

The Auburn Grain Co. has been incorporated at Lincoln, Neb., with a capital stock of \$5,000. The directors are S. Cochran, L. Higgins, E. H. Ely, M. W. Connor and J. Moody.

The O. H. Eggleston Grain Co. at Murdock, Neb., has been incorporated with a capital stock of \$25,000. The incorporators are O. H. Eggleston, L. Eggleston and H. W. Eggleston.

Contracts for two new elevators for the Nebraska-Iowa Grain Co. have been let and buildings will be built at Winslow and Uehling, Neb., with a capacity of 30,000 bushels each.

C. K. Holliday has been appointed receiver for the Taylor Grain Co. at Topeka, Kan. The company's mill and elevator are valued at \$150,000; the debts and mortgage amount to about \$96,000.

W. J. Elliott of Surprise, Neb., has taken into business as a partner F. L. Myers, formerly in the employ of Bossemeyer Bros. The business will hereafter be conducted under the firm name of Elliott & Myers.

The Omaha Elevator Co. has purchased the Farmers' Elevator at Pickerell, Neb. In our November issue we reported that the Pickerell Farmers' Elevator Co. had bought the Nebraska Elevator Co. at the same town.

The Hynes Grain Co., a new acquisition to the grain colony in Omaha, Neb., may build an elevator there. The company has been incorporated with a capital stock of \$50,000. The incorporators are W. J. Hynes, P. Hynes and W. J. Miller.

The Foster Grain Co. and Thomas Cochrane will build a 75,000-bushel elevator at Lincoln, Neb. It is stated that the building will be 40x47 feet on the ground and six stories. It will be a frame structure and will be used as a cleaning house.

A contract has been let to the Barnett & Record Co. of Minneapolis, Minn., for the erection of a million-bushel grain elevator at Kansas City, Mo., by the Burlington Railway Co. on the site of the former Harroun Elevator, which was destroyed by fire last January. It will cost about \$500,000.

The Osage City Grain and Elevator Co. at Osage City, Kan., has finished its improvements. The elevator head was raised and a new cleaning room built. It also installed a new Cornwall Corn Cleaner and a United States Corn Sheller. The company is composed of F. B. Bonebrake and M. W. Cardwell. They own another elevator at Harveyville, Kan.

Merriam & Holmquist have purchased a tract of ground adjoining that already owned by the firm at Sixteenth and Manderson streets, Omaha, Neb., and will erect grain-storage tanks with a capacity of 350,000 bushels. The elevator which the firm is building has a capacity of 125,000 bushels. With the completion of the new building and storage tanks the Merriam & Holmquist firm will have elevator capacity in Omaha of 1,500,000 bushels, its elevator at Seventeenth and Nicholas streets having a capacity of 1,000,000 bushels.

MINNESOTA AND WISCONSIN.

The R. E. Jones Co. is building an elevator at Theilman, Minn.

A farmers' elevator company has been organized at Lakefield, Minn.

The Jones Elevator at Millville, Minn., has commenced operations.

C. L. Maxwell has purchased a grain elevator at Worthington, Minn.

C. L. Maxwell has purchased the Truax Elevator at Worthington, Minn.

Lemler & Brown have taken charge of the grain house at Hillsdale, Wis.

A. L. Wirtz of Kaukauna, Wis., is having an addition built at the elevator to make room for an elec-

tric motor and feed. The mill will have a capacity of two tons an hour.

The Farmers' Elevator and Coal Co. will erect coal sheds at Austin, Minn.

It is reported that an elevator will be built at Superior, Wis., this winter.

The new elevator of the Willmar Milling Co., Clara City, Minn., is completed.

The Farmers' Elevator Co. at Lakefield, Minn., has decided to build an elevator.

S. Stewart has let the contract for the erection of a new warehouse at Chokio, Minn.

The elevator of the Red Lake Milling Co. at Red Lake Falls, Minn., is now complete.

The Peterson Farmers' Elevator Co. at Lanesboro, Minn., has incorporated with a capital of \$20,000.

The capacity of the Farmers' Elevator at Clinton, Minn., has been increased by an addition of 24x26 feet.

It is reported that the S. Y. Hyde elevator at Rushford, Minn., may be sold to a farmers' elevator company.

Borden & Selleck Co., Chicago, Ill., has just shipped a Howe Scale to the Northern Grain Co., Manitowoc, Wis.

Farmers in the vicinity of Buffalo Lake, Minn., are considering the proposition to organize a farmers' elevator company.

A meeting of farmers was called recently at Beaton, Minn., to take steps toward organizing a farmers' elevator company.

The Lakefield Co-operative Farmers' Elevator Co. has been incorporated at Lakefield, Minn., for \$50,000. J. C. Caldwell is secretary.

Konrad, Schreier Co. of Sheboygan, Wis., has placed the contract for an 8,000-bushel elevator to be built at Plymouth, Wis., with the Burrell Engineering and Construction Co. of Chicago. It will be run by an 8-horsepower gasoline engine.

A report states that a 500,000-bushel grain elevator will be built at Superior, Wis., by a company that will shortly incorporate under the state laws. Wisconsin inspection, it is stated, will be called for and the elevator will be run as a public house under the state law.

NEW CROPS IN NEBRASKA.

Director W. P. Snyder of the Nebraska Experiment Station says that, "We had some Bromus inermis, or brome grass, which will pay \$50 per acre for the seed crop this year. We planted it August 23 of last year, simply disking and harrowing the naked sod. The stalks stood three or four feet high when we cut it and the ground was a mat of leafage. That field stands about eight inches high now and would make the best kind of pasturage. The farmers of our vicinity have watched this field with great interest and I know of three or four hundred acres of Brome grass that will be planted this fall. It does not require the fertility of soil necessary for grain crops. In fact, sandy points develop a strong sod and produce hay. I believe that Brome grass will be a great factor in the utilization of the sand-hill district of Nebraska. You see, the sandhills would be productive if a sod could be obtained and retained when pastured. Brome grass makes the sod and is not easily stamped out by the cattle grazing over it.

"The hay is said to be excellent, too. I have not had enough experience with it to say whether it is better than wild hay or not, but my brother, who has a farm in Hayes County, claims that Brome grass hay is stronger feed than wild hay. Several farmers in his vicinity harvested four tons per acre on their fields this year.

"Alfalfa has proved successful in Lincoln County. We had all of the rain necessary for a good crop this year. I was surprised at some results obtained this year from ground which has been seeded to alfalfa for two years. I harvested 27 bushels of macaroni wheat per acre on this ground, while on adjoining ground which had never been planted to alfalfa, the yield was only six bushels per acre. The difference between the two yields shows that alfalfa is a great soil builder. Macaroni wheat is a successful drouth resister. It is being grown throughout the entire western part of the state. This wheat has a very hard kernel and makes excellent flour.

"Kherson oats have been produced from forty to sixty bushels per acre this year. I understand that they produced about 10 bushels per acre more than other varieties on similar soil. This has not been a good year for experimenting with the drouth resisting qualities of this variety of oats, for we have had about all the rain that we could stand."

THE EXCHANGES

The contract for the new Board of Trade Building at Indianapolis has been awarded.

John Jack has been appointed chief grain inspector of the Detroit Board of Trade.

The directors of the Mobile Chamber of Commerce on December 2 elected T. C. Robinson of New Orleans to be chief grain inspector for the port of Mobile, succeeding Alexander Krudop, resigned.

Calumet Elevator "B," located at South Chicago and operated by Bartlett, Frazier & Carrington, was made regular by the directors of the Chicago Board of Trade December 5. The elevator has a capacity of 1,500,000 bushels.

By vote of the directors of the Chicago Exchange November 28, the elevator at Thirteenth and Lumber streets, under the proprietorship of the Harris-Scotten Co., was declared regular for the storage of grain and flaxseed. A week later the house contained 119,000 bushels of No. 2 hard winter wheat.

New members admitted to the Cincinnati Chamber of Commerce last month are: Edward F. Dennis, deputy grain inspector; George W. Thomas, C. Jutte & Co., coal, Pittsburg, Pa.; Edward A. Fitzgerald, Cincinnati Grain Co.; George F. Blauvelt, Morris & Co., Chicago; Frank J. Currus, Van Leunen Co.; Thomas J. Bolger, Marmet Coal Co.

The transportation department of the Chicago Board of Trade November 28 issued a notice effective December 5 that Western railroads would cancel their rule forbidding the acceptance of mixed shipments of grain and seeds consigned to Chicago. Only one regular switch will be made on such mixed shipments. Each additional movement of cars from any elevator, etc., to other industries or to team tracks will be subject to a minimum charge of \$5 a car.

The building committee of the Winnipeg Grain Exchange is making arrangements to put up a building at the corner of Lombard and Rorie Streets, Winnipeg, for the accommodation of the Exchange members. The new building is expected to cost in the neighborhood of \$250,000, and when completed will be one of the finest buildings in Winnipeg. Circulars have been sent to the members of the Exchange to ascertain what space each will require so as to enable the building committee to determine how large a building to plan.

The board of directors of the Chicago Board of Trade has decided against giving official sanction to a plan proposed by the state grain inspection department to extend the jurisdiction of the inspection department so as to include the elevators at Hammond and Indiana Harbor, Ind. The principal reason for deciding against the plan was the attorney-general's decision that the inspectors could not go beyond state limits. The attorney-general's opinion was given in response to a request made by Chief Grain Inspector W. Scott Cowen.

Harry J. Wood has been elected treasurer of the Boston Chamber of Commerce, succeeding Daniel G. Morss, who was appointed secretary in place of Elwyn G. Preston, resigned. Mr. Wood also is treasurer of the New England Grain Dealers' Association. He is a graduate of Harvard University of the class of 1887. Soon after leaving college he entered the employ of Moses Dorr & Co., and later became a member of that firm. He became a member of the Chamber of Commerce in 1895, and in January of last year was elected a member of the board of directors. He served as a member of the committee on information and statistics in 1902 and the following year was chairman of that committee. Last year he was a member of the transportation committee. His place on the board of directors and as a member of the committee on rooms has been filled by Edward F. Clapham.

Arthur F. Lahey, a pit trader on the St. Louis Merchants' Exchange, was placed under arrest last month on the charge of devising and participating in a scheme to defraud. He was indicted by the Federal grand jury in its investigation of the get-rich-quick concern run by Arthur McIntire, under the style of the Merchants' Brokerage and Commission Co. This concern was broken up by the post-office inspectors two years ago, and McIntire is now working his way through the penitentiary at Jefferson City, Mo. The specific charge against Mr. Lahey is that he entered into an arrangement with McIntire to furnish confirmations of grain trades, purporting to show that given quantities of grain had been bought or sold on the floor, when in fact such trades had not been made for McIntire or his clients. Lahey is a member of the Merchants' Exchange and was in the employ of the T. E. Price Commission Co. The day before Lahey's arrest Richard H. Kastor was arrested on

a similar charge, alleging his connection with the Merchants' Exchange and the McIntire concern. It is said he is the one who contracted with a state official to use the latter's influence to prevent the issuance by the postoffice department of a fraud order against the brokerage firm.

Samples of Manitoba grain of this season's crop have been sent by Secretary C. N. Bell, of the Winnipeg Grain Exchange, to the secretaries of the principal British corn exchanges, and to the superintendent of the New York Produce Exchange. The purpose in sending the official standard samples, as set forth in a letter accompanying each sample, is that through the assistance of the various secretaries the trade may have definite knowledge of the character of the average of the grading by the Canadian government inspectors of Manitoba wheat of this year's crop. The secretaries are asked to use the best possible means to have importers and millers examine the samples, and are requested to retain a portion of each sample for reference purposes in cases of questions arising in connection with shipments of Manitoba wheat arriving in Great Britain with the proper Canadian inspection certificate.

NEW SECRETARY OF THE PHILADELPHIA COMMERCIAL EXCHANGE.

L. J. Logan, of the firm of Logan & Co., was on November 24 elected secretary of the Philadelphia Commercial Exchange to succeed Charles F. Saunders, who recently resigned on account of the poor health of his wife and the necessity on that account of their removing to California.

Mr. Logan is a native of Philadelphia and was educated in the public schools. After graduation from the Central High School, in 1876, he spent some time in the employ of the Reading Railway, a business he abandoned some twenty years ago to go into grain. He became a member of the Commercial Exchange in 1887.

Mr. Logan began his term on December 1, when Mr. Saunders retired. The latter's resignation was regretted by the Exchange, whose directors adopted resolutions expressive of that fact, and voted him an extra month's salary. Mr. Logan will not, however, begin actual duty until January 1, H. A. Tumulty, assistant secretary, acting pro tem as secretary.

AMENDMENTS AT CHICAGO DEFEATED.

On December 11 the members of the Chicago Board of Trade voted on nine amendments to the constitution of that association. But one was adopted, viz., that to Section 2 of Rule XXI, providing that there shall be no afternoon delivery on Saturdays, except when Saturday falls on the last day of the month when there is a regular session of the Board.

Of the measures voted down, the two amendments to Section 14 of Rule XXII were the most important, as they were a radical change in business methods as at present conducted. These brought out the full strength of the Board and were voted down by majorities respectively of 683 and 629, the total vote being 795. These measures were briefly as follows:

The amendments to Section 14 of Rule XXII covered essentially the same ground, one aiming to compel the purchaser of grain millfeed or seeds to pay 80 per cent of the value of the commodity on demand and presentation of proper documents, and the other giving the seller the option of demanding such an advance. An amendment to Rule XXII, to be known as Section 15, which was lost, aimed to make it obligatory on receivers to charge current rates of interest on amounts advanced on consignments or purchases, fixing the minimum rate of interest so charged at 5 per cent per annum.

DANIEL D. MORSS ELECTED SECRETARY.

On November 14 Daniel D. Morss was formally elected secretary of the Boston Chamber of Commerce, to succeed Elwyn G. Preston, recently retired. Mr. Morss, who has been acting secretary of the Chamber since June 1 last, the date of Mr. Preston's retirement, has been a prominent member of this Exchange since its organization in 1886, as he was of its predecessors, Boston Corn Exchange and later the Commercial Exchange, of all of which he has been treasurer.

Mr. Morss was born in Boston in 1848. The family had long been conspicuous in Boston's commercial annals; and at eighteen, after graduation from the Boston public schools, Mr. Morss entered upon his business career as employee of the house of Harvey, Scudder & Co., flour commission merchants, of which his father was junior partner. On his father's death in 1870, he succeeded to the partnership, which was continued until 1873, when the firm of Jackson & Morss was organized to do a general grain handling business, his partner being George S. Jackson. This connection continued until 1880, when the firm was dissolved, Mr. Morss continuing the foreign, or export, business of the

firm in connection with the firm of H. B. Goodwin & Co.

As stated, Mr. Morss has long been prominent in the management of Boston's commercial organization, of which he has been an official since 1871, when he became treasurer of the old Corn Exchange. Since then he has been treasurer of the Commerce Exchange and Chamber of Commerce, member of the committees of these several exchanges on grain (1878-1880 and 1882-1891 and chairman in 1885-1886), on transportation (1879-1880 and 1891-1892), and on arbitration (1894-1895). He is looked upon as an especially valuable authority on grain matters.

Mr. Morss has never held public office or taken any active part in politics. Since 1880 he has resided in Dorchester. He married a daughter of John A. Glidden, of the old Boston-California packet firm of Glidden & Williams. His favorite pastime is yachting, and he is a member of the Eastern Yacht Club and of the Boston Art Club.

Mr. Morss' election gives great satisfaction to the members of the Chamber of Commerce, with whom he has always been a great favorite.

FRED MULLER TO RETIRE.

Secretary Fred Muller, of the New Orleans Board of Trade, has declined to be a candidate for reelection to that office at the end of his present term. He retires to go into a line of business which he has not as yet announced.

Mr. Muller has been conspicuous in grain trade circles in New Orleans for several years, first as member of the old Maritime Association. As a member of the executive committee of that Association, he assisted in its reorganization, which resulted in the birth of the Maritime Exchange. He afterwards became secretary of the Exchange, which he served until April, 1902. He was then elected secretary-treasurer of the Board of Trade, and has since held that position.

During Mr. Muller's term of service at the Board of Trade, the Produce Exchange and the Maritime Exchange have been merged with the Board of Trade, making the latter one of the strongest and best equipped exchanges in the South. The membership list is now as large, if not larger, than at any time in the Board of Trade's history, notwithstanding the fact that the dues have been raised from \$25 to \$50. The stock of the Exchange, which sold at one time as low as \$10 a share, is now selling at \$240 and \$250 a share. During the time that he has held the position there have been many improvements made in the property of the Board of Trade, and to-day the interior of the Exchange is one of the handsomest rooms in the city.

COMMISSION

John G. Lonsdale, formerly of the firm of John G. Lonsdale & Co., Little Rock, Ark., on December 1, became a partner in the firm of Logan & Bryan, Chicago. The name of the firm remains unchanged.

J. A. Albert Geidel, of D. G. Stewart & Geidel, hay and grain commission merchants, Pittsburg, Pa., has recovered from his illness of last month and is able to be about and attend to his accustomed duties with his usual vigor.

J. G. Claphamson of Minneapolis, Minn., has retired from the grain business in that city and will spend the winter in California. It is said that on his return East he will engage in the grain trade at St. Louis.

Corcoran Brothers of Milwaukee, Wis., have incorporated with a capital stock of \$5,000 to engage in the grain and feed business. The incorporators are C. L. Corcoran, Thomas M. Corcoran and Josephine Corcoran.

L. Bartlett of Milwaukee, late head of the commission firm of L. Bartlett & Son Co., received many congratulations from numerous friends last month on the occasion of the seventy-sixth anniversary of his birth. Mr. Bartlett has been a member of the Milwaukee Chamber of Commerce since 1867.

The Milwaukee office of Tracy & Co., grain brokers, is under the management of E. D. Harrington, formerly of New York. He succeeds A. N. McGeogh. It is rumored in Milwaukee that Mr. McGeogh and H. C. James, who has retired from Tracy & Co.'s Chicago office, will open a business office in the Railway Exchange.

The Eclipse Commission Co., Nashville, Tenn., has been the subject of inquiry by the local police. It is said that a grain commission business under that style was started by a man who gave the name of Tressel. He is alleged to have operated long enough to accumulate a number of outstanding accounts, but when the police received

complaints and visited the office they found it had been vacated.

J. L. Frederick has disposed of his interests in the Matthews-Frederick-Broughton Grain Co. at Kansas City, Mo., and has entered the grain business at St. Joseph, Mo.

The golden wedding anniversary of Mr. and Mrs. Thomas D. Randall of Chicago was celebrated December 2. Mr. Randall is the pioneer commission merchant of Chicago, having sold the first dollar's worth of goods sold in Chicago on commission. He was born at Providence, R. I., in 1833. His produce commission business was established in 1852. In 1902 the business was divided, the hay, grain and flour departments being removed to the Board of Trade Building. The produce business, under the name of G. W. Randall & Co., is continued at the old location in South Water Street.

ARBITRATION DECISION.

The following decision was rendered by the arbitration committee of the Grain Dealers' National Association:

United Grain Co., Buffalo, N. Y., vs. Kirkpatrick, Lackland & Co., Chenoa, Ill.—Claim originating as to responsibility on grain inspected within inspection distance at destination, then delayed as to movement, and, during said delay, property depreciating in value on account of deterioration of quality.

March 1, 1904, defendant sold plaintiff "One car No. 3 Yellow Corn at 42 cents, Chenoa, Ill.; rate, 24 cents, New York; terms, Buffalo, shipment loaded;" on which sale car 4,506, corn, was forwarded via C. & A. R. R. to Chicago, and L. S. & M. S. R. R. to Buffalo, N. Y.

Car 4,506, corn, arrived at Athol Springs, N. Y., on April 13, 1904, and was inspected by Buffalo inspector, "Corn, No Grade, Yellow; musty, damp, cool. Car too full, and will be reinspected when unloaded." Athol Springs apparently being a railroad yard, about six or seven miles west of Buffalo.

Plaintiff notified defendant of this inspection same day, and also that "Car was ordered rush to their elevator, and think it will be in a day or two, and we will base our discount at that time."

Value of No Grade Corn, poor, hot, 35 to 47, best in Buffalo; value of No. 3 Yellow Corn, 57 in Buffalo.

This report could have but one effect, as shippers were not notified that this inspection was at Athol Springs, but instead led shippers to believe that the car had arrived at Buffalo, and helped them to decide that tracing of shipment was not necessary.

Car was finally placed at elevator for unloading May 11, 1904, and graded "Damaged Corn—Hot." Value of No Grade Corn, poor, 20 to 45, best in Buffalo, N. Y.; value of No. 3 Yellow Corn, 53½ to 54, in Buffalo.

Value of contents discounted, 34½ cents per bushel. No notice of this discount given to shipper until returns were made.

Questions involved are many and of a delicate nature, as both parties failed to protect their rights.

Notice of April 15, 1904, of arrival of car 4,506 released defendant of any further interest in the movement of the property, he having never been notified that inspection was at Athol Springs and not Buffalo, N. Y.

Plaintiff notified L. S. & M. S. R. R. April 15, 1904, to place car at elevator for unloading. Car placed for unloading May 11, 1904. Contents reinspected, grading "Damaged Corn—Hot."

When did defendant agree to deliver this corn at any particular elevator? Was their contract not for Buffalo delivery? And should such delivery not have been hastened by plaintiff?

We have no right to assume anything; yet had Buffalo delivery been made, that would have ended defendant's interest, and the inspection then would have had to govern the settlement as regards discount. Evidence is lacking as to how these conditions could have been complied with. The facts are that it took 28 days to obtain the final inspection, and during this period this grain suffered in quality.

Defendant does not show where he made any effort to hasten the movement of the car, yet his contract called for Buffalo terms and settlement of the car, and delay in non-arrival at destination should have awakened his interest and have car traced.

Adjustment under these conditions is unfavorable, but we find by market conditions on April 13, 1904, the difference in quality on corn grading No Grade was 10 cents per bushel for the better, being the smallest market difference, the poorer being discounted same day 22 cents per bushel.

These differences could not cover this car, as on that day it was at Athol Springs.

We presume that in the following seven days it depreciated 5 cents more, believing that in such time the car could have been moved into Buffalo,

N. Y., basing that time on the time it took to move from Chenoa, Ill., to Athol Springs, N. Y.

Claim of plaintiff for transfer charge of \$2.25 is not allowed.

Claim of plaintiff for error in freight of \$5.06 is allowed, as defendant does not take any exceptions to said charge.

Car 4,506, contained 90,248, adjusted at a difference of 15 cents per bushel, on account of quality; difference, \$135.43.

We accordingly award the plaintiff \$140.49, with the cost of arbitration, to be equally divided between plaintiff and defendant.

(Signed) WARREN T. McCRAE,
ADOLPH GERSTENBERG,
C. B. JENKINS,
Arbitration Committee.

Toledo, Ohio, Sept. 7, 1905.

BARLEY AND MALT

The American Malting Co. is to be reorganized under the laws of Connecticut.

A Walla Walla farmer sold his barley crop (3,600 bushels) to a local feed mill at \$1 per bushel.

Chas. Koestner & Co., Chicago, are preparing plans for a brewery and malt house to be built at Memphis, Tenn.

Franklin B. Giesler, Milwaukee, Wis., has been granted United States letters patent No. 805,356 on a pneumatic malting drum.

A barley pool formed in Columbus County, Wash., sold 110,000 sacks in one lot at 90 cents per cental. An effort will be made to make the pool permanent, each member pledging himself to sell his barley only through the pool.

A company headed by D. D. Weschler of Erie, Pa., has rented the malt house of the late firm of Wm. Gerlach & Co. at Milwaukee, to be used until the company can erect a modern plant on a site selected in North Milwaukee.

The Seitz Malting & Grain Co. has been organized at Buffalo, N. Y., with capital of \$50,000. The directors are Charles S. Seitz of Buffalo, Charles F. Seitz of Easton, Pa., and Clarence E. Seitz of Philadelphia. The company will do business in Buffalo.

SCIENTIFIC BARLEY CULTURE.

For the purpose of improving the methods of barley culture locally, the Brewers' Association of Bohemia has formulated the following rules as embodying the suggestions of the first European experts. The rules are, of course, more directly applicable to European conditions, but will afford a suggestion to American farmers. The rules are translated by the American Brewers' Review from Der Böhmisches Bierbrauer as follows:

"1. Barley prospers best after a hoed crop which was fertilized. 2. Deep vegetable soil; fall plowing; in the spring only light cultivation (weeding or only harrowing). 3. Direct fertilizing is inadmissible; according to the condition of the soil, some phosphate or potash may be strewn early in the preceding winter, or, still better, with the previous crop; lime soils agree with barley. 4. Only seed which is of pure variety, sound, full berried and of strong germinating power should be used; the Old-Bohemian, Hanak barley acclimatized in Bohemia has proved best. 5. Seeding should be done in rows and as early as possible; there should be no excessive economy in seed grain. 6. Barley should be cut when it is perfectly ripe; it should then be housed at once, but well dried; the barley should not lie long in the straw. 7. The greatest care should be exercised in thrashing; the least injury to the berry depreciates the grain. 8. The effort should be to obtain the purest, most uniform and odorless barley by careful aeration, cleaning and grading; attentive cleaning of the barley from all admixtures and thinn berries increases its value very considerably. 9. Barleys of different colors, or musty, or unevenly dried, should never be mixed, because this also diminishes the selling value. 10. In selling, observe strict integrity, and keep the reputation of fair dealing."

The annual meeting of the policyholders of the Mill Owners' Mutual Fire Insurance of Iowa will be held at Des Moines, Iowa, at 2 o'clock p. m., on Wednesday, January 17, 1906.

Green Bay, Wis., made a new record at the Cargill Elevator on November 25, when 160,000 bushels of oats were loaded out the S. S. Maryland in six hours, or at the rate of about 27,000 bushels per hour.

HAY AND STRAW

Corcoran Bros., Milwaukee, Wis., is a new firm incorporated to sell, deal in and handle hay, oats and grain. The capital stock is \$5,000.

An increasing amount of business necessitating more space, Ford B. Strough, the Boston hay commission merchant, has removed from 31 McLellan Street to 91 West Dedham Street.

The Midland Alfalfa Co. has incorporated at Lincoln, Neb. The company has a capital stock of \$200,000, and is organized to promote agricultural and irrigation projects in Nebraska.

Fire near Williamsburg, Kan., on the Atchison, Topeka & Santa Fe road, recently destroyed 200 tons of hay—most of it on the Silkville ranch, owned by Troutman & Stone of Topeka, Kan.

Just what happens to a "plugged" car of hay, and who loses money on such a proposition, is shown in a letter from a Pittsburg commission firm which is printed in our "Communicated" column this month.

The hay and coal warehouse of J. Brown at Oakland, Cal., was burned last month, causing a loss of \$500. The fire made a spectacular blaze and tied up traffic on the Southern Pacific tracks for half an hour.

A loss of \$3,500 is the result of fire in the hay, grain and feed store of H. K. Brainard at Thompsonville, Conn. A spark from the locomotive hauling the Boston & New York Express is supposed to have caused the fire.

Thomas Loham, who has been in the hay and grain business at Marblehead, Mass., for a number of years, has retired. His two sons, Thomas, Jr., and Benjamin H., will continue the business under the name of Loham Brothers.

The firm of John J. Lappin & Co., Portland, Me., has been organized and incorporated for \$30,000, \$300 of which is paid in. The firm will deal in grain, mill feed, hay and straw. Officers are: President, John J. Lappin; treasurer, Hugh H. Lappin.

A freight rate of 75 cents per hundred has been secured on alfalfa meal from Seattle, Wash., and other Pacific Coast points to Eastern points. The rate was granted at the request of Seattle interests, who are planning the erection of an alfalfa meal mill in Seattle.

New mills have been erected at South Omaha, Neb., by the Lucerne Products Co. for the manufacture of stock feed. The company had 123,000 gallons of molasses in steel tanks and large quantities of alfalfa and grain in store the latter part of November and began manufacturing feed early this month. The company will have excellent trackage facilities and is arranging for handling a big business.

A two-story brick alfalfa mill and hay and grain storage warehouse has been completed at Kansas City, Kan., for the Woolsey-Stahl Hay Company. The new building is at the corner of Second Street and Nebraska Avenue and the company has removed to that location from the old quarters in West Eleventh Street, Kansas City, Mo. The storage warehouse is to be known as the U. S. Warehouse and the meal mill as the Woolsey-Stahl Hay Company Alfalfa Meal Mill.

The Massachusetts Ploughman says that when all has been done that can readily be done to supplement a short hay crop by growing substitutes on the farm, something may also be accomplished by exercising good judgment in the feeding of hay. To obtain best results, about one-half of the dry matter of the ration should come from the grain feeds. If a considerable part of the coarse fodder of the ration comes from the silage, a small part only need be provided in the form of hay.

SWITCHING CHARGE DECLARED ILLEGAL.

A decision has been rendered in favor of the Loftus-Hubbard Elevator Co. of St. Paul in its suit, brought before the Railroad and Warehouse Commission of Minnesota against the Chicago, Milwaukee & St. Paul Railway Co., to prohibit that railway company from making any rate or charge whatever for moving or switching cars from its tracks in St. Paul, which are designated and known as "hay tracks," to any industry in that city on their line, or to any connecting line in St. Paul. No charge for this service was made prior to September 1, 1905, but since that time the railroads have made a charge of \$1.50 per car for switching cars off their hay tracks.

The elevator company in its complaint claimed that this charge of \$1.50 was wrongful and unlawful, and that the defendant road had never at any time received from the Railroad and Warehouse Commission authority or permission to fix or exact this charge or any charge for the service specified.

STATE VICE-PRESIDENTS N. H. A.

State vice-presidents and assistants of the National Hay Association have been named as follows: F. F. Collins, chairman, Cincinnati, Ohio. Alabama—W. C. Agee, Birmingham; E. Wilkinson, Birmingham. Arkansas—Rudy Copeland, Jonesboro; Ed. C. W. Wilkins, Hazen; A. L. Delbel, Little Rock. California—A. E. Clutter, Los Angeles. Connecticut—R. G. Davis, New Haven; W. E. Terry, Bridgeport; O. G. Camp, Waterbury. Colorado—W. B. Lilley, Jefferson. District of Columbia—Howard L. Wilkins, Washington; F. B. Swart, Washington. Florida—Harwood Rosser, Jacksonville; H. E. Snow, Tampa. Georgia—G. H. Brooke, Atlanta; F. W. Hazlehurst, Macon; G. Y. Banks, Columbus. Illinois—Fred Morrison, Ramsey; A. C. Durdy, Ohlman; S. E. Stokes, Ramsey. Indiana—A. E. Reynolds, Crawfordsville; James Guild, Medaryville; C. G. Egley, Berne. Indian Territory—E. L. Kelley, Vinita; Frank Gaines, Fairland. Iowa—John Reidy, Winthrop; H. G. Weinburg, Lamont; Frank Weimer, Ledyard. Kansas—W. H. Beatty, Norway; J. H. Turner, Wichita; F. H. Harder, Yates Center. Kentucky—Amos Yeager, Louisville; John Dorsel, Newport; C. J. Clausen, Louisville. Louisiana—Jordan T. Lawler, New Orleans; George J. Pleasants, New Orleans; Joseph V. Ferguson, New Orleans. Maryland—Emory Kirwan, Baltimore; L. B. Betts, Hagerstown; W. S. Corbett, Spickler. Massachusetts—Ford B. Strough, Boston; C. W. Bowker, Worcester; T. L. Wood, Boston. Minnesota—R. D. Cassel, Minneapolis; G. D. Jewell, Duluth. Michigan—Geo. F. Dimond, Mayville; W. T. Hulscher, Battle Creek; Frank E. Nowlin, Albion. Missouri—R. C. Menefee, Kansas City; D. W. Clifton, St. Louis; G. W. Schreiner, Lamar. Nebraska—E. A. Knapp, Omaha; J. F. Twamley, Omaha. New Jersey—E. W. Berthoff, Jersey City; A. A. Hanks, Jersey City; C. E. Cassidy, Jersey City. New York—C. S. Caywood, Weedsport; D. W. Beam, Hemlock; C. A. Coleman, Savannah. North Carolina—C. F. Mitchell, Winton. Ohio—L. W. Dewey, Blanchester; A. W. Cheney, Springfield; S. W. Kemp, Spencer-ville. Pennsylvania—E. D. Rundell, Towanda; John H. Irvin, Philadelphia; C. W. Morgan, Osceola. Rhode Island—J. P. Donovan, Providence; C. I. Burlingame, Providence. Tennessee—J. H. Wilkes, Nashville; J. C. Bennett, Nashville; C. R. Balrd, Chattanooga. Virginia—S. T. Beveridge, Richmond; M. Kivligham, Staunton. West Virginia—C. E. Pride, Clarksburg; Wm. Ellingham, Wheeling. Wisconsin—H. Boncher, Luxemburg; Geo. A. Duvall, Kewaunee; Fred W. Hurlburt, Green Bay.

EFFECT OF CAR SHORTAGE ON HAY TRADE.

J. A. Manger & Co., Baltimore, Md., December 7.—Our hay market rules only steady, with the offerings fully equal to the demand. The best grades of timothy and mixed hay are selling fairly well at quotations, but low grades are slow sale. Clover hay is about the scarcest of all descriptions and No. 1 would readily bring \$12.50 per ton. Evidently Western farmers are not over-anxious sellers, since shipments to this city from the West are not heavy.

We do not look for much improvement in the market until after the turn of the year.

Arsenault & Co., Boston, Mass., December 6.—While the supply of hay is ample for the Boston markets, we are constantly short of the better grades of timothy and clover mixed to fill our orders at country points. This we attribute primarily to the fact that of this year's crop only a small proportion will grade better than No. 2. Hence most shipments are sent direct to the larger markets to be sold on their merits. Then the great scarcity of cars is holding back shipments, which is really beneficial to the general situation, for there is such a large crop everywhere that if cars were plentiful the markets would be swamped. We find that shippers have bought very freely from the farmers and have in many cases been obliged to stop their presses on account of the scarcity of cars. If prices have been high at country points, it is due to the same old cause, sharp competition among the buyers without regard to results. We do not know of any line of business that is carried on in such a haphazard way at the country end as the hay business, both with regard to buying from the farmers and the loading and grading of cars.

Hamacher-Nichols Co., Kansas City, Mo., December 7.—The prospects are that the present high prices will be maintained until the first of the year, and unless there is an improvement in the car situation after that time it would not surprise us to see the market go higher, as bad weather will more or less affect shipping. Taking that into consideration, with the scarcity of cars, the prospects are that we will have very light receipts and correspondingly high prices. The general opinion of shippers is that after New Year's cars will be more plentiful, but we do not look for the prices of good hay to decline to any extent. Farmers as a rule are willing

to dispose of their hay at the best prices that are being offered now and shippers are getting in as much hay as they possibly can, but are handicapped on account of the shortage of cars. In most localities the farmers are busy gathering corn and are not giving the hay as much attention as they will after the corn crop has been taken care of. Farm help is scarce and in a great many instances hay presses cannot get enough help to keep their balers going.

W. P. Devereux Co., Minneapolis, Minn., December 5.—We are having a firm, steady trading market at present values with nothing in sight to warrant any material change for the balance of the month. No. 1 to choice timothy is selling quickly at \$9.50 to \$10, No. 1 to choice upland at \$8.50 to \$9, No. 3 to No. 2 timothy \$7 to \$8.75, No. 3 to No. 2 upland \$7 to \$8. Receipts have been just about barely sufficient to take care of current requirements, and the reasons for stuff not moving more promptly are late weather conditions, which were rather unfavorable, other work, as well as scarcity of cars, all contributing toward light receipts at terminal points. The car situation is so contracted that even with a material lessening in the stringency it will not be sufficient to allow a heavy movement of hay from country points during any particular period, so that we look forward to an even and steady movement from shipping points to terminal markets during the major portion of the season and good, steady prices throughout.

H. W. Benedict, New Orleans, La., December 9.—Our trade this past season has been very satisfactory since October. Previous to that there was considerable hay marketed here, particularly low grades, which had a tendency to accumulate and make the market somewhat stagnant, but am happy to state the demand has become exceedingly large, and all hay sold on this market has been profitable to the shipper. We do little or no business with farmers, our business being with the hay people throughout the country; in fact, we do not quote farmers or post them in any manner. The present outlook, as well as that of the coming months, in so far as hay is concerned, is one that, after waiting several years, is going to be most beneficial to all concerned. The scarcity of cars and the great delay in getting hay to this market has somewhat educated the trade to use the next best grades to top grades, which will assist farmers to put up a good sweet hay where it is impossible to raise strictly top grades. It is our belief that there will be very little acreage of such hay next season, as it seems from year to year alfalfa is becoming an important factor, and is being universally used throughout the South. Think it will only be a matter of time before this market will be called upon for considerable. What assists the shipper now in these high prices is the scarcity of cars, although we note that Michigan is beginning to get considerable cars for Southern market, but transportation is anything but prompt. It is our belief that within ten days the car situation throughout parts of the hay belt will be somewhat relieved. Indiana seems to be suffering more than any other state we know of, and we may be safe in saying we believe the time for low prices this season has passed and look for a steady market with fair values.

The Ady & Crowe Mercantile Co., Denver, Colo., December 7.—The only hay handled or shipped from here in any quantities is alfalfa, and in regard to this crop the quality this year is very fine, but the quantity is a great deal less than last year's crop. Besides this the sheep feeders have contracted for a great deal of this hay in the stack, so that the amount of alfalfa to be shipped from Colorado this year will be small and the car situation is making shipments very slow for even this small amount.

OUR CALLERS

[We have received calls from the following gentlemen prominently connected with the grain and elevator interests during the month.]

G. T. Richey, Oregon, Ill.
J. M. Chappell, New York City.
M. F. Seeley of Seeley, Son & Co., Fremont, Neb.
M. E. Rozelle, Nashville, Tenn., representing The Wolf Co., Chambersburg, Pa.
Chas. H. Ridgway, secretary Western Millers' Mutual Fire Insurance Co., Kansas City, Mo.
L. S. Meeker, Minneapolis, Minn., representing Richmond Manufacturing Co., Lockport, N. Y.
William Reed, Kansas City, Mo., southwestern agent Michigan Millers' Mutual Fire Ins. Co., Lansing, Mich.

FIRES--CASUALTIES

Fire at Bangor, Pa., last month damaged the elevator on the D. L. & W. R. R. Loss is \$1,000.

Fire at Fryeburg, Me., November 28, destroyed the grain store and grist mill of H. W. Cousins. Loss was \$6,000, with insurance at \$2,200.

An elevator at St. Joachim, Essex County, Ontario, owned by F. B. Stevens of Chatham, has been destroyed by fire, with a loss of \$7,000.

Prentiss, Brooks & Co.'s elevator on Mechanic Street, Easthampton, Mass., was damaged by fire November 24. There was but a small loss.

A defective door in one of the grain bins in the elevator at Dorothy, Minn., November 22, allowed 600 bushels of wheat to run out into the sand pit.

Considerable grain was scattered over the ground and more or less damaged by the collapse of a flat house at Silver Leaf, Dickey County, N. D., November 25.

Ten thousand bushels of wheat and flax were generously distributed over the ground and side-tracks when the Farmers' Elevator at Kempton, N. D., burst recently.

Jackson & Gundy's corn elevator and feed mill at Chillicothe, Mo., with a large quantity of grain and chop stuff, was destroyed by fire last month, entailing a loss of \$10,000, covered by insurance.

Several thousand bushels of grain was dumped out on the ground recently by the bursting of an annex to the Farmers' Elevator at Newville, N. D., which was built to accommodate the rush of grain.

The Alberta Milling Co. lost \$3,000 worth of grain sacks last month in a fire which destroyed Whitelaw & Co.'s warehouse at Edmonton, Alberta, in which the sacks were stored. Total loss was \$4,500.

Fire at Scott, ten miles south of Paulding, Ohio, destroyed the large hay barn of the McMillan Grain Co., with its contents. Sparks from a passing locomotive on the Cincinnati Northern Railroad started the fire.

The north end of the grain warehouse of Balfour, Guthrie & Co. at Reardan, Wash., gave way November 17, and let out 5,000 bushels of wheat. The warehouse is operated by the Washington Grain and Milling Co.

Grain, hay, live stock and farm buildings with an estimated valuation of \$500,000 were burned in a prairie fire in the vicinity of Aberdeen, S. D., last month. An area five miles wide by twenty miles long was devastated.

Sparks from a locomotive on the O. R. & N. R. R. at Garfield, Wash., last month caused a fire in the grain warehouse of the Kerr-Gifford Co. There was no wind blowing and the fire was soon extinguished, but at a loss of \$1,000.

Fire at Davidson, N. D., December 5, destroyed the Federal elevator and 15,000 bushels of flax contained in the elevator. Insurance is 75 per cent of the value of the elevator. The fire is thought to have had its origin in a defective flue.

A corner of the Cargill Elevator at Portland, N. D., burst out last month, spilling 2,000 bushels of flax. The accident occurred in the early evening at a time when there was no one around the elevator. The house was built twenty-three years ago.

Twelve thousand bushels of wheat was scattered over the ground November 22, as the result of the collapse of the north wing of the elevator at Walhalla, N. D., owned by the Federal Elevator Co. The building was an old one and was not intended for an elevator.

Safe blowers, in an attempt to rob the safe of the Long-Bell Lumber Co. at Cherryvale, Kan., November 21, caused a fire which put several lumber firms and the W. O. Whitney Grain Co. out of business. The total loss is \$150,000, of which the grain company lost \$25,000.

O. T. Hulburd & Co.'s grain elevator and office at Woodburn, Iowa, were destroyed in a conflagration which visited that place November 18. Timothy seed and oats stored in the elevator were lost. Loss on the elevator and office is \$3,000 and on the grain \$6,000. The total fire loss is estimated at \$35,000.

Scott & Co.'s new 80,000-bushel elevator at Bethany, Ill., was burned recently with a loss of \$10,000. The elevator is said to have been one of the best equipped in Central Illinois. It had just been completed by a Chicago contracting firm and no grain had as yet been received. The fire is supposed to have been caused by a hotbox developed during a machinery test a few hours previous. The loss falls on the contractors, as they

had not formally turned the house over to the owners. It will be rebuilt.

Defective insulation is believed to have been responsible for a fire which destroyed the Kern County Land Co.'s storage warehouse at Bakersfield, Cal., November 24. Several thousand bushels of grain were destroyed or damaged so badly as to be worthless. The loss is estimated at close to \$50,000, with no insurance.

Pressure of wheat in the south bins of the elevator at Grafton, N. D., leased and operated by Fred Stunkel, burst out the entire south end of the house and 5,000 bushels of wheat were poured out on the ground. The damage to the wheat was considerable, but a good deal of time and labor was required to clean it up.

At Eureka, S. D., the elevator of John Pietz collapsed late in November and 12,000 bushels of wheat poured out onto the ground, overturning a carload of bran on the switch. All but about 250 bushels was saved from damage. At Garden City, S. D., an elevator containing 1,800 bushels of flax collapsed, with but little damage except to the elevator.

Fair Brothers' elevator at Hutchinson, Kan., was burned to the ground November 21, destroying several thousand bushels of corn and considerable lumber in the supply house near by. A car of grain on the Santa Fe tracks was hauled away from the elevator in time to save it. Fire is thought to have been caused by spontaneous combustion. Loss is over \$6,000.

Quick work in taking 18,000 bushels of wheat out of the Peavey Elevator at Chatham Siding, five miles south of Hallock, Minn., prevented a general collapse of that structure last month. The house was found to be toppling over and was in danger of falling across the railroad tracks. Its condition necessitated taking the grain out in baskets and sacks.

Frank T. Nelson, manager of the Northwestern elevator at Litchfield, Minn., narrowly escaped serious injury December 6. In placing a belt on the pulley his clothing was caught on the set-screw which clamps the pulley to the shaft. He was whirled round the shaft, his clothing was torn from him and he sustained painful bruises, though no bones were broken.

An elevator at Breda, Iowa, owned by the Northern Grain Co., was burned November 20. The house was filled with wheat, oats and barley and is a complete loss. It was managed by Myers Bros. Assistance secured from Carroll, Iowa, saved the town and confined the fire to the elevator and the railroad station adjoining it. Loss on the grain and elevator is estimated at \$3,000.

Settling of the warehouse of the Velva Grain Co. at Granville, N. D., a few weeks ago made it necessary to let the wheat in the house out on the ground to prevent a general collapse and mix-up of wheat and flax. The warehouse was improperly blocked up at the time it was constructed to prevent the settling and it failed to withstand the pressure of the grain when filled to full capacity.

A loss of \$10,000 was sustained in a fire which destroyed the Ireys' elevator at Drake, N. D., recently. The house had a capacity of 13,000 bushels and was nearly full. Loss was covered by insurance. Sparks from an engine which passed shortly before the fire was discovered are believed to have been responsible for the fire. As soon as the debris can be cleared away a new elevator with a capacity of 30,000 bushels is to be constructed.

Cardwell & Bonebrake's big elevator at Osage City, Kan., was destroyed by fire November 17. A large quantity of corn, wheat, flour and feed in the house was also burned. The elevator was equipped with new machinery a week before the fire, but it is a total loss. Though their loss aggregates close to \$15,000, Cardwell & Bonebrake immediately made arrangements to continue their business in temporary quarters and will rebuild the elevator as soon as possible.

The biggest fire in the history of Bonesteel, S. D., occurred last month when the elevator, coal and lumber sheds of Wm. Krotter Co. were destroyed in a fire thought to have been of incendiary origin. In the elevator were 13,000 bushels of oats, 3,000 bushels of wheat and 3,000 bushels of corn, all of which is practically a total loss, although there will be some salvage secured from the sale of the grain to farmers round about for feed. Loss is \$20,000, with insurance at \$11,500.

Fire at Sterling, Colo., November 24, destroyed the Sterling Alfalfa Meal Mill and a considerable amount of alfalfa meal. The loss on the building, contents and machinery will run over \$5,000, with insurance at \$2,000. The building formerly was used as a flour mill, but last August was fitted out with machinery for grinding alfalfa, for which it had a capacity of 15 tons a day. It was the only mill of its kind in the state. There had been no fire under the boilers for two days, and it is sup-

posed the fire originated through the carelessness of tramps who have been in the habit of entering the building through the engine room door.

COURT DECISIONS

[Prepared especially for the "American Elevator and Grain Trade" by J. L. Rosenberger, LL. B., of the Chicago Bar.]

Sale Completed Only on Payment of Draft.

The Supreme Court of Rhode Island held, in the case of Vaughn vs. New York, New Haven & Hartford Railroad Co., that where a bill of lading was sent by the seller through a bank, accompanied by a draft upon the buyer, who was obliged to pay the draft and obtain the bill of lading before he could secure the goods, title to the goods did not pass to the buyer until he paid the draft and obtained the bill of lading, and that if the goods were destroyed before that time he could not by afterward paying the draft and taking up the bill of lading obtain a title which would relate back so as to authorize him to sue for the destruction of the goods. The court further held that where a carrier permitted the consignee of merchandise to open the cars containing the same after they had been placed on a spur track near the consignee's warehouse, and to remove part of the contents thereof and exercise dominion over the same, and put his own locks on the cars, the carrier's liability as such for the merchandise in the cars was terminated, and that where the consignee of merchandise had accepted a delivery thereof and sold and removed some of it, the fact that such merchandise still remained in the carrier's cars for the convenience of the consignee did not impose any liability as warehousemen on the carrier.

Insufficient Description of Grain in Lien Notice.

The Washington statute requires a line notice to "contain a description of the property to be charged with the lien sufficient for identification with reasonable certainty."

A notice given stated that a lien was claimed upon that certain crop of wheat, being about 450 acres in quantity, being about 850 number of sacks of wheat, which was raised by one Austin upon certain described premises, the aforesaid lands having been cultivated for the crop of 1903 by said Austin.

The Supreme Court of Washington holds (Dexter vs. Olsen, 82 Pacific Reporter, 286) that the facts set forth in the notice were not sufficient in themselves to show jurisdiction of the court over the subject matter. It says that the lien notice involved in this case told the approximate number of sacks of wheat (about 850) and stated where it was grown; but there was no other description. Nothing was said as to the quality or kind of wheat; nothing as to the character, size or markings of the sacks. The whereabouts of the wheat was in no manner indicated. It might have been in the field, in the barn or in somebody's warehouse. It might have been in the county where the land was located or elsewhere. It might have been in the state of Washington or in some other state. The court does not see how any person could locate or identify the wheat in question by the description given. Unless he should resort to sources of information outside of the lien notice, an officer seeking to execute a judgment or decree against this wheat would be powerless.

"Seed trains" will be run through Iowa this winter as usual, but Secretary Wells has not yet made up the itinerary.

The offers of a constitutional government and the ceding of millions of acres seem to inflame rather than appease the nihilists, anarchists and labor unions of Russia. The strikers are again ungovernable and it is possible that the ancient and honorable house of Romanoff may soon be roamin' off from St. Petersburg. The only reign may be a reign of terror.—Pope & Eckhardt Co. Circular Number 16.

Grain thieves have been very active this fall in the South Chicago (Calumet) district, making much trouble for the Grain Shippers' Protective Association. Recently four men who had stolen grain from the elevator of the Peavey Grain Co. were pursued by three watchmen in a boat for two blocks, the watchmen firing several shots at the thieves. As the latter reached the west bank of the Calumet River at One Hundred and Fifth Street they left their boat and escaped in a wagon.

PERSONAL

M. B. Kortgard is a new grain buyer at Kramer, N. D.

Albert Arp will manage John Damanns' elevator at Tipton, Iowa.

Charles Furman has removed from Petersburg, N. D., to Grand Forks, N. D.

O. M. Erickson is buying grain at Fairdale, N. D., for the Atlantic Elevator Co.

Follet & Emert's grain elevator at Dewar, Iowa, is in charge of John Tegtmeier.

The Cargill Elevator at Forbes, N. D., has been placed in charge of Carl Woodard.

J. J. Menk of Spiritwood, N. D., has taken charge of the Andrews Elevator at Dickey, N. D.

A. M. Hanson has been appointed agent for the Peavey Elevator Co. at Butterfield, Minn.

Mr. Emminga's grain business at Golden, Ill., has been put under the management of F. E. Sahland.

M. M. Wright has moved from Adaza, Iowa, to Wightman, Iowa, and is buying grain at that place.

The Carlon & Beardsley elevator at Corsica, S. D., is now under the management of Arthur Rietz.

R. C. Traner, of the Woodworth Elevator Co., has taken charge of that company's elevator at Fairdale, N. D.

W. B. Mitchell, Toledo, Iowa, has resigned as manager of the Wells-Hord Grain Co.'s elevator at that station.

Louis Schur has removed from Arthur, N. D., to Carrington, N. D., and has assumed charge of an elevator there.

Iowa Elevator interests at Palsville, Iowa, are now under the supervision of Jacob Blocker of Meserney, Iowa.

Miss Margaret Houlihan will have charge of the Holt grain elevator at Fithian, Ill., while J. C. Freeman is in Oklahoma.

Ottin Lein of Oscar, Minn., has taken a position as assistant grain buyer for the Interstate Grain Co. at Rothsay, Minn.

Jacob Trainor, formerly manager of an elevator at Bow Bells, N. D., has assumed charge of an elevator at Lansford, N. D.

W. D. Fisher is in charge of the East Elevator at Byron, Neb., succeeding I. B. Stewart. Mr. Stewart is buying grain on his own account.

E. P. Bacon has bought the warehouse at Pil-lager, Minn., and is agent for the Monarch Elevator Co. He is buying all kinds of grain.

The Crown Elevator at Orient, S. D., is now in charge of Albert Ravnaas, as manager. Mr. Ravnaas is a resident of Orient and well known.

Will Moore, manager of the Pacific Coast Elevator Co.'s interests at Pendleton, Ore., has been nominated as candidate for mayor on petition.

George Pickens has resigned as manager of the Farmers' Elevator Co. at York, Neb., and is traveling for Otis Smith, a grain commission firm at York.

The elevator at Beatrice, Neb., is in charge of G. W. Warner. Mr. Warner recently bought the elevator at Ellis, Neb., and is operating both houses.

Walter Cullins, who has had charge of J. E. Miller's elevator at Maynard, Iowa, has removed to Walker, Iowa, to take charge of an elevator at that place.

E. S. Hoff has closed the Victoria Elevator Company's house at Pembina, N. D., and has taken charge of a house for the same company at Strasburg, N. D.

J. L. Frederick, formerly a partner in the Matthews-Frederick-Broughton Grain Co., at Kansas City, Mo., has re-entered the grain business at St. Joseph, Mo.

The Woodworth Elevator Co.'s elevator at Irene, N. D., is in charge of Mr. Laing, who for some time has been in the employ of the same company at Ardoch, N. D.

Harry Crawford, who has been buying grain at Sebeka, Minn., has moved to Park Rapids, Minn., to fill the place made vacant by his father, A. A. Crawford.

Jacob Carlin, engaged in the grain business at Armour, Iowa, met with a sad loss last month in an explosion of acetylene, in which his wife was burned to death.

Jerome Elliott, proprietor of the People's Elevator at Leipsic, Ohio, and Mrs. Zoe Breckbill of that place were married quietly last month. It was thought by his friends that Mr. Elliott was a

confirmed bachelor, but he surprised them all. He has served as a member of the village board and is classed as a shrewd and successful business man.

The new elevator at Calvin, N. D., owned by the St. Anthony and Dakota Elevator Co., has been opened for business with J. W. Ramsdale of Crookston, N. D., as manager.

The elevator at Grand Mound, Iowa, owned by the Northern Grain Co., has been placed in charge of Charles Merkel, who has been for some time in the employ of the same company at Mt. Vernon, Iowa.

The Duluth Elevator Company's elevator at Atwater, Minn., has been placed in charge of Peter Westlund, who has removed to that place from Harwood, N. D., where he has had charge of an elevator for several years.

F. A. Brauer, hay and grain dealer at Sixth and Harriett streets, Cincinnati, Ohio, has been laid up for a few weeks as a result of an accident November 28. While attempting to get into his buggy he slipped and fell, tearing a large piece of skin off his leg.

An elevator owned by the McCaull-Webster Co. of Minneapolis, Minn., at one of the new stations on the Ashland extension of the Great Northern Railway in Nebraska, has been placed in charge of John Bring. Mr. Bring has for three years had charge of the McCaull-Webster elevator at Vermilion, S. D.

Henry C. Dupuis, formerly foreman of the Detroit Railroad Elevator Co.'s elevator at Detroit, Mich., has been appointed superintendent of that elevator, filling the vacancy caused by the death recently of Supt. B. F. Bears. Mr. Dupuis has made numerous friends on the Detroit Board of Trade, who are glad to learn of his promotion.

E. E. Ingold, manager of the Round Elevator at Milbank, S. D., has about recovered from a serious injury received in October, and is looking after affairs at the elevator as usual. He was accidentally caught and whirled around the engine shaft in the elevator. His brother, P. M. Ingold, of the McIntyre-Ingold Co., Minneapolis, Minn., looked after the elevator during his brother's absence.

IN THE COURTS

In the action of the Pine Island Farmers' Elevator Co. against M. E. Billings, at Red Wing, Minn., a verdict was rendered on December 1 for \$1,198.46. This amount Billings, as manager, was said to owe the company in settlement of his accounts.

The New York Court of Appeals has sustained a verdict of \$900 interest and costs against S. K. Nester of Geneva, N. Y., in favor of the estate of John H. Markle. The facts are that Markle bought barley for Nester; and after a particular lot was purchased it was stored for a time in a building at Himrods. Some time after the placing of the grain in store the structure collapsed. Then Nester refused to pay for the barley, it being alleged that the grain belonged to Mr. Markle, who is now dead.

The famous Denbigh (N. D.) fire insurance case (Denbigh Farmers' Independent Elevator Co. vs. Fire Insurance Company of North America) again came to decision at Grand Forks on November 29, when the United States District Court directed a verdict for the defendant. The action was brought to recover \$5,500 on policies covering the elevator building and the grain therein, which was burned nearly two years ago. The Insurance Company resisted payment on the grounds of fraudulent proofs of loss. Three exactly similar cases have been tried in the Federal Court, and the jury in each found a similar verdict.

The Murdock Grain Co. of Clifton, Kan., has filed a complaint against the Mo. Pac. Ry. Co. with the Railroad Commissioners of Kansas, alleging discrimination in the matter of supplying cars to complainants. The petition alleges that the Murdock Grain Company had had orders for empty box cars for the shipment of grain with the Railway Company for some time, but that the orders have not been filled, although the company has a large number of "empties" standing on the switches at Clifton all the time. It also recites the fact that the agent for the railroad company at Clifton has told the grain dealers that he has orders to send all of the empty cars to Arkansas, and that their order cannot be filled before a certain date in the future.

South Africa has begun taking American wheat, Tacoma having shipped two cargoes that way (destination port not named) about November 15.

TRANSPORTATION

The Rotterdam-Boston service was resumed on November 29 by the Holland-Boston Line.

The Missouri Pacific has canceled an order for the removal South of all empty box cars at stations contiguous to Atchison, Kan.

The "Soo" line of the Canadian Pacific system opened for traffic on December 3 its extension of 300 miles from Thief River Falls, Minn., to Kenmare, N. D.

It is again rumored that the Canadian Northern Railway is preparing to open a line to a port on Hudson Bay through which a five months' route may be opened to Europe.

The Chicago, Milwaukee & St. Paul Railway Co. will be built through to the Pacific with terminus on the Sound at Tacoma, where large purchases of land for yards have been made.

Since December 4 the Erie Railroad has not accepted shipments for the Twenty-eighth Street Station, New York City, and will not until further notice. The embargo does not apply to grain in transit or loading on December 2.

Lake navigation ended December 5. Rates offered vesselmen at Chicago are not high enough to warrant them in paying the special trip hull insurance demanded after close of navigation, and extra cargo insurance rates make a total so large the shipper is unwilling to figure on it.

The car shortage on the Big Four lines has reached such a state that an embargo has been placed at Louisville, Ky., on the Chesapeake & Ohio trade. The latter line has taken a good many cars from the Big Four, and it is hoped that the stoppage of this drain will greatly help out matters.

Within a short time an interchange arrangement for the shipment of freight from points on the Baltimore & Ohio to points on the Pennsylvania Lines West, and vice versa, will be placed in operation. The change will affect all the lines west of Pittsburg, Erie and Wheeling of the two systems.

The Canadian Pacific Railway has issued orders to guarantee the out-turn of grain shipped from Fort William elevators to West St. John for export to within a fraction of 1 per cent west of St. John. Out-turns will govern in the case of grain shipped through from the West, without going through Fort William elevators.

The special grain department of the Chicago Great Western Railroad in Kansas City was abolished December 1. The change means that the grain and flour business of the road will be handled in the future the same as any other traffic. This business will be under the charge of H. H. Churchill, now chief clerk in the office of the division freight agent in St. Joseph, Mo.

On December 1 the Chicago & Eastern Illinois Railroad abolished its reconsigning charge of \$2 a car on all grain arriving at Chicago, whether consigned locally or through billed. After inspection, all grain is entitled to one movement free to any industry in the city on the company's lines, or to any junction point where interchange is made with competing lines. The Chicago Great Western took similar action November 28.

To relieve the congestion in outer yards and bring in cars consigned to Chicago hay commission merchants more promptly, the Chicago & Northwestern Railway is placing cars on team tracks at six different points in the city, instead of two, as is the custom when the movement is more free. Cars are placed on team tracks now at Sixteenth and Laffin Streets, Lake and Rockwell Streets, Clinton Street, Sixteenth and Union Streets, Grand Avenue and Erie and Halsted Streets.

Executive officials of Western roads, at a meeting in Chicago, December 12, settled a prospective grain rate war, the St. Paul agreeing to cancel its through corn tariffs as posted December 1, which made a through rate from the Southwest to Liverpool lower by 2 to 3½ cents than the rates agreed upon between the Gulf lines and the Western and Atlantic seaboard lines last September. All roads assented to a test 4-cent differential in favor of the Gulf ports and against the Atlantic ports for six months.

Orders have been issued by the Central Freight Association advancing on December 11 the rates on grain shipments to the southeast 2 cents per 100 pounds from Illinois points and Cincinnati and Louisville. The effect of these orders will be to cause a more equitable adjustment of the competitive rates between St. Louis, Cairo and Evansville on the one side and Cincinnati and Louisville on the other. The increase relates only to grain of Illinois billing. The shrinkage of three

cents on all grain of Western billing is granted as heretofore. This will not affect Cairo, East St. Louis or Evansville shippers, as they enjoy similar privileges.

A number of Baltimore exporters who were in Chicago early this month said the Pennsylvania Railroad is full of loaded grain cars from the Coast, as far inland as Harrisburg, the condition arising from the fact that the elevators at Baltimore are full. The elevators are loading out as fast as possible, but the delays are so serious and so help to intensify the car shortage situation that an embargo on grain shipments to Baltimore has been ordered by the Pennsylvania Railroad, which is expected to continue until after January 1.

The Canadian Railway Commission has issued notice that if at any time before January 31 next, the Grand Trunk Railway fails to furnish at Midland, Collingwood, Meaford and Point Edward, sufficient empty cars to fill all shipping orders then on file at such point, such cars as are furnished shall be apportioned among such shipping orders which have been filed for more than one day, at such port, in the order of filing, until one car has been allotted to each order, after which the remaining cars, if any, shall be apportioned, pro rata, among the remainder of such orders which have been so on file for more than one day, and which have not been filled. This operation shall be repeated from day to day, so long as the supply of cars is less than the requirements.

A meeting of railroad men and grain shippers of Kansas City, Mo., was held on December 1 to discuss the car situation. Grain men are disposed to fall back on the new demurrage law if something is not done soon to relieve the congestion, and a few dealers have already applied for cars under the formula called for by the law and advanced the proper cash deposit required to secure payment of the freight bills; but this procedure is by no means general, the disposition being to be as lenient as possible on the carriers. Another thing asked for by the shippers is a change in the method of issuing bills of lading on reconsigned grain. The grain men wish the railroads to issue bills of lading immediately upon receiving notice of the arrival of grain cars in the city. Under the rules now governing the issuance of bills of lading these papers are not made out by the forwarding line until the grain has been delivered to them. Thus if a car of grain is brought to Kansas City over the Missouri Pacific to be forwarded over the Rock Island, the purchaser of this grain does not get his bill of lading from the Rock Island until the grain is in Rock Island cars or on their tracks. As it often takes five or six days and even a week to make the transfer, the grain man has his money tied up for a long time.

WILL IT PAY TO HOLD CORN?

According to information just collected by the Missouri Agricultural College, the farmer who puts his corn in a crib to hold it for better prices can count on a loss by next June of at least 15 per cent. That is to say, leaving out of account the cost of handling and loss by waste, 30 cents a bushel for the crop now is better than 35 cents next spring, says Orange Judd Farmer.

This conclusion is based on the reports of careful experiments covering seven years and extending over a large part of the Mississippi Valley. At the Iowa station, for example, 7,000 pounds of corn were husked and stored October 19, in a crib built upon scales, in order that the weight might be taken without disturbing the natural condition of storage. There was a shrinkage of 9 per cent for the first quarter year, 5 per cent for the second, 3 per cent for the third, 2.5-7 per cent for the last quarter. The experiment was conducted under the conditions that normally exist in this section of the United States and the results may, therefore, be taken as typical of those that will obtain on the average Missouri farm.

The Missouri College of Agriculture, however, does not advise farmers to sell their corn, but to feed it to some class of animals, thus returning as much of it as possible to the soil. Careful estimates show that where corn is fed, 85 per cent of it can be sent back to the field to preserve its fertility. Selling the crop means taking this 85 per cent from the farm and thus, needlessly, reducing its fertility.

"Employees: Elevator must be thoroughly examined each evening before closing." Print this on a good-sized card and tack it up.—McCotter.

The Montreal Harbor Board has decided not to take steps to make the grain elevator a bonded warehouse for the handling of American export grain. The cost was only \$40 a year, but the Board decided that to make the elevator a bonded warehouse would restrict its business.

THE CO-OPERATIVES

The Farmers' Grain Co. of Latham, Ill., is trying to increase its capital by sale of more stock.

The farmers' elevator company at Atlanta, Ill., has sold out to Adams & Iddings; and that at Atwood, Ill., to the Atwood Grain and Coal Co.

The Farmers' Co-operative Grain and Live Stock Shipping Association will hold its annual meeting at Lincoln, Neb., on January 17-20, both dates included.

The Pine Island Farmers' Elevator Co. sued its late manager, M. E. Billings, for a settlement, the differences at issue being \$2,200, and got a verdict for \$1,198.46.

The deputy scale inspector of North Dakota found the scale of the Farmers' Elevator Co. at Jamestown weighing against the company at the rate of something over 5 per cent.

The farmers' companies at Tuscola and Windsor, Ill., known as the Tuscola Grain and Elevator Co. and the Windsor Grain Co. have been recognized as regular dealers.

The Farmers' Mill and Elevator Co. at Devil's Lake, N. D., claims to have reduced the differences in the local and Duluth markets on wheat from 17 cents in 1904 to 10½ cents in 1905. But 3½ cents is due to the reduction in rates, leaving a net gain of 3 cents. When other buyers have offered more than the Farmers' company the grain was sold to the competitors, but when the price dropped to that of the Farmers' company, that concern took all that was offered. The Farmers' elevator alone handled 100,000 bushels of grain this season up to November 15.

A sample of co-operative grain elevator management that has been before the North Dakota public for some time is the case of the Farmers' Independent Elevator Co. of Denbigh, N. D., whose elevator was burned two years ago. Since that time three ineffectual efforts have been made to force an insurance company to pay insurance loss on property which the juries twice have declared was not destroyed by the fire in question. On November 29, Judge Amidon, of the United States District Court of North Dakota, in directing a verdict for the defendant insurance company, reviewing the facts of the case, which he would not allow to go to a jury, said in substance that the evidence showed at the time of the fire the Farmers' Independent Elevator Company was short with the Edwards-Wood Company in shipments about \$20,000. It was also shown that ninety-five fraudulent wheat checks had been issued, several of them to fictitious names, and that no evidence had been introduced explaining these checks satisfactorily. The court also spoke of some correspondence between Fred G. Haver, president of the company, and Charles Pake, manager of the elevator, which he said conveyed a covert meaning, when he was advised to "use his quill." The court further stated that the evidence showed that the proof of loss was a fraudulent one, and that Mr. Haver's estimate on the cost of the building was at least one-third above the actual cost. He said further that the Edwards-Wood Company had been victimized by the Farmers' Independent Elevator Company, but that while the firm (which was the real plaintiff in the case) was entirely blameless of any wrongdoing, they should not be allowed to shoulder their losses on the Insurance Company.

STATE MEETING OF CO-OPERATIVE COMPANIES.

The Farmers' Independent Grain Dealers' Association of Kansas recently held a two days' meeting at McPherson, of which C. W. Peckham was chairman and E. M. Black secretary. Thirty farmers' companies were represented.

One of the Kansas roads having failed to adjust claims for alleged shortages or to furnish cars on demand, the following resolutions were adopted, addressed to the state Railroad Commission:

"Whereas, Several of the transportation companies traversing the state of Kansas are grossly violating the laws of the state by discriminating in favor of some of the grain firms and against the farmers who raise the grain by what is known as the elevator charge; and

"Whereas, This so-called elevator charge is a discrimination against the grain growers of from 1¼ to 2½ cents per 100 pounds, which is arbitrarily taken from the producers and given to favored firms; and

"Whereas, The laws of the state of Kansas do not permit or countenance such practice on the part of the public carriers; therefore, be it

"Resolved, That the Farmers' Independent Grain

Dealers of Kansas hereby call the attention of the attorney of the state Railroad Commissioners, the Hon. Carr Taylor, to this illegal practice and most respectfully ask him to take steps to abolish this outrage at once, so that the men who grow the grain are placed on an equal footing with the firms unduly favored by the railroad corporations.

"We further call Mr. Taylor's attention to the fact that the corporations are grossly violating the car demurrage law as provided by statute by refusing to furnish cars or making reparation, notwithstanding the shipper may have complied in full with all the requirements of said law by depositing a part of the freight money and making said demand in writing; and be it further

"Resolved, That we, the Farmers' Independent Grain Dealers of Kansas, ask your honor to assist the shippers in compelling the transportation companies to comply with the act providing for furnishing cars when ordered by shippers who comply in every way with the law as provided in the case."

NOVEL HUSKING OUTFIT.

When the high water came in the Mississippi River this fall, the farmers on the river bottoms of Madison County were ready to abandon their corn crop, standing in the shock, as lost. However, as the water was dead and remained stationary at about three feet deep, an ingenious farmer conceived the idea of going into the fields with boats. Improvised flatboats were thereupon built, and every skiff within miles of Oldenburg, the center of a flooded area, was pressed into service.

Then the inundated lowlands presented a busy scene. Skimming here and there among the shocks, the boats could be seen, while on the hastily constructed flatboats shuckers were plying their trade and tossing the golden ears into adjoining skiffs. As fast as the boats were filled with corn they were rowed to high land and hauled away in wagons. The shuckers tossed back into the water the fodder, which had become moldy because of its long immersion, and was unfit for use. But the corn itself had suffered little. Some of it was soft because of the absorption of water through the stalks, but most of it was in good condition.

Most of the inundated land, of which there was about a thousand acres, had been sown in wheat, and this crop had been ruined entirely by the standing water, but the novel-shucking operations have saved to the farmers in the neighborhood several thousand dollars.

The largest single cargo of oats ever sent from Baltimore was shipped November 10 by Louis Muller & Co. on the steamer Tolesby. The cargo consisted of 337,192 bushels and was consigned to Hamburg. It made up the full cargo of the vessel, a rare occurrence in the shipment of oats.

The Chicago Hay Warehouse Company, whose incorporation was mentioned in this department several months ago, has elected officers as follows: President, George S. Bridge; vice-president, W. H. Moorhead; second vice-president, H. L. Randall; treasurer, C. F. Van Wie; secretary, John R. Leonard. These constitute the board of directors. Fifty per cent of the capital stock has been paid in, and prospects are favorable for the early construction of a hay warehouse to be used jointly by the C. & N. W. and the C. M. & St. P. Railroads.



WHAT'S THE CORRECT ANSWER?

The "Little Bear" says Argentine crop is splendid—the "Big Bull" says it's not. Who will be right and will our prices be affected by the outcome, or will we rule independently—same as most of last year?—Zahm's Letter.

OBITUARY

T. D. Fronting, a grain dealer prominent at Grundy Center, Iowa, died December 10.

Captain J. E. Stone, a pioneer lake sailor and grain dealer, died early this month at Oconomowoc, Wis.

D. T. Gilman, formerly a prominent grain dealer at Atlantic, Iowa, died November 21 at his home in Santa Barbara, Cal.

Henry R. Scott, formerly in the grain business at Gibson, Ill., but in later years identified with the implement business, died at his home in Kansas City, Mo., early last month.

John S. Smith, senior member of the hay, grain and feed firm of John S. Smith & Co., Baltimore, Md., died at his home in Baltimore last month. He is survived by the widow and six children.

William Murphy, formerly prominent in the milling and grain business at Hamilton, O., died last month. During the past twenty-five years or so he had been prominent in local town and state politics.

D. J. Gregor, agent for the McCaull-Webster Grain Co. at Utica, N. D., died suddenly November 28. He was seized with a fit of coughing which brought on a hemorrhage of the lungs and resulted in his death in less than an hour.

Mrs. William Van Tassell of Peoria, Ill., passed away December 4 at 6 p. m. She was the mother of R. W. Van Tassell, of Van Tassell Grain Co. of that city. Mrs. Van Tassell has been steadily declining for a year past and her death was not unexpected. She was one of the older residents of Peoria, was prominent in church work and was a member of the Relief Corps G. A. R.

John Beggs, one of Chicago's early settlers and for many years a member of the Chicago Board of Trade, died suddenly in the Apartment Hotel at Bloomington, Ill., November 12. Death was due to heart failure. Mr. Beggs was 72 years old and for a number of years had charge of the grain business for W. F. Johnson & Co., Chicago. He had been calling on the grain shipping trade at country points in the interests of that firm for several years. His home formerly was in Hyde Park, but after the death of his wife last spring he had lived with friends at 2419 Michigan Avenue. His only relatives, so far as is known, live at Ottawa, Canada. The body was brought to Chicago for burial.

George W. Marling, a member of the old grain commission firm of R. Eliot & Co., Milwaukee, Wis., which was dissolved five years ago, died at his home in Milwaukee, November 21. It was thought that Mr. Marling was fast recovering from a surgical operation that had been performed on him a few weeks previously, but a turn came and he sank rapidly. He was a native of Germany and was 61 years old. He located in Milwaukee fifty years ago, and entered the employ of the R. Eliot Co. as bookkeeper in 1870. Subsequently he became a member of the firm, retiring in 1900, when the firm was dissolved. Since that time he had been interested in real estate and in the lead and zinc mines in Wisconsin. His mining interests were disposed of to a syndicate last year. A son, Alexander Marling of Madison, Wis., and a daughter, Mrs. Irving Willets of Pittsburg, Pa., survive him.

THE CURRENT SESSION OF CONGRESS.

[From an address by A. T. Anderson, a representative of the National Board of Trade, at the annual meeting at Toledo of the National Hay Association.]

There is a word or two I wish to say in connection with the practical side of organization. It has been my lot to visit a number of commercial organizations since I have represented the National Board of Trade. I have come in contact with some of the ablest and most successful business men of this country, in all lines of production. I have listened here with interest to papers disclosing the fact that there was a menace or threat hanging over the hay business that was perplexing and annoying the members of this Association and that was threatening injury to the future of the business. Now, that is true, not only of the hay business, but of other businesses as well; and it is a healthy sign, and a tribute to your intelligence, that you have discovered that fact. Growth depends upon the discovery of these things and the application of business experience and the best judgment you possess to the solution of the problem.

In every line of human activity is that same complaint of evolutionary changes that are coming

in. No man can tell from whence they come; no man is wise enough to determine and direct their course. And yet through it all is represented the progress of this great nation. We have our problems, many of them, and it will require all the patience and genius we possess to solve them wisely. In some countries they do not have these problems. They do not have them in China to any extent, neither do they have them in India. They do not have them in countries where the standard of well-being is so low it will not admit of a social problem. Now, do not get discouraged if we appear to have troubles. "Trouble," I once heard a minister say, "is the telescope through which people look to God," and I have sometimes thought there was a great deal of truth in his words.

I am glad you are paying attention to the question of railroad rate legislation. That is near to you and it is important. But there are other great questions. The next Congress will be called upon to consider some questions as great in their importance as any it has considered since the close of the Civil War. This is not the time for me to go into this matter, nor have you the patience to listen while I rehash this question; but I will say that besides the railroad problem there is the corporation problem as well. The time will never come, at least during our lifetime, when corporations will not continue to grow in this country. They are great institutions—properly handled and restricted and regulated by law. They aggregate the money of the small investors and render it possible to carry on the gigantic enterprises that are necessary to the growth and development of our country. It is essential that we have, first, wise legislation; that we have honest men who direct, as directors of these corporations, and then we should encourage them to go on and build up still stronger and greater this republic; but while they are doing that we want legislation that will give to their transactions that publicity that will prevent forever after the grafting we have recently witnessed and that has been so repulsive to the people.

About one-third of what we produce must be sold in foreign markets. What are the conditions in foreign markets? Germany has notified us of an increased tariff. Last year we sold Germany \$217,000,000 worth of our products. We are enforcing the Chinese exclusion laws in a way of offensive to a great many of those people, and in consequence they are boycotting our goods. Since 1902 American sales have fallen off nearly \$10,000,000. The social side of these questions I do not care one straw about. What we want, and what we must have, is trade and commerce with foreign nations if we expect to continue this rate of production and find foreign markets. (Applause.) Is there the remotest possibility that in dealing with China, or in dealing with any nation or individual, you can carry your product in one hand and your prejudices and hates in the other and expect to find a profitable market? Gentlemen, you cannot do it.

These questions and their effect upon the business of this nation may be great or they may be less. Their effect will be greater or less as you business men let your representatives in the national Congress know your wishes. We are confronted now with a deficit of two and one-half millions of money. It is hardly possible the expenses of the government can be reduced. New sources of revenue will probably have to be discovered. Across the border in Canada they are in the same situation. Increases in the expense of governing have become fixed, and Canada is talking of increasing her tariff on American products. All over the world is this attempt to restrict American products, not on account of feeling against us but for the sake of preserving within those countries what the people believe to be their rights as subjects of such governments.

So these problems are to multiply; and one of the most potent forces that will affect American trade, in my opinion, will soon come from the cessation of hostilities between Russia and Japan. The little nation of Japan will soon go back to manufacturing; and once she does you will find her about the liveliest competitor that ever brought her wares to a market in the world.

Various plans have been resorted to to keep rats out of cribbed corn. The crib is often raised a foot or so off the ground on posts, which are sheeted with tin and have a flange or collar of tin at the top which prevents the rats from climbing up. This method is a very good one if the building be located far enough away from other buildings. The inside or outside either can have fine meshed woven wire put on, which will add to the efficiency of the obstruction to the rats. In this way the crib can be made of slats and with cracks to let in plenty of air. It will pay to build a crib that is proof against rats and mice, as they destroy a great deal of grain during the year.—Ex.

CROP REPORTS

In southern California the earlier sown grain is in an excellent condition and farm work is progressing rapidly.

The wheat and oat fields in parts of Texas present a very fine appearance, oats especially being up to a fine stand and growing rapidly.

The month of November was unusually favorable for husking corn in Iowa, and probably four-fifths of the crop has been harvested.

Wheat in Kansas has attained a good stand and color and is growing since the recent rains. Corn husking has been delayed by rains.

Jones of Minneapolis, Minn., who recently visited the Coast, places the wheat crop of Washington, Oregon and Idaho combined at 53,000,000 bushels.

Charles Hillicker of the C., M. & St. P. Ry. at Aberdeen, S. D., states that fully 10 per cent of the grain crop is still unthreshed, and that not more than 30 per cent has gone forward.

Weather in Missouri is generally favorable. Wheat and rye never looked better at this time of the year. Corn gathering is hindered by wet soil, but about three-fourths of the crop is cribbed.

Nebraska has had a warm, wet month. Corn husking has been delayed and some corn damaged. The crop is only about half secured. The yield in many places is less than expected before husking.

The unusually late run of fine weather in sections of New York has been a boon to the farmers, as they are still engaged in taking care of their corn crop. Winter wheat is looking unusually fine and pastures are green.

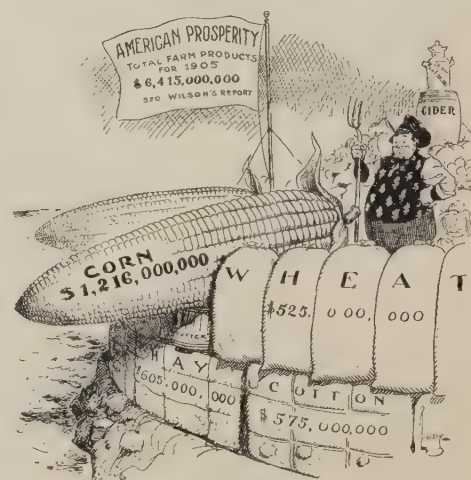
The Illinois state report issued on December 1 states that the weather was exceptionally favorable for farming operations in the central and northern districts, but too much rain interfered with work in the south, and plowing and husking were retarded. Wheat maintains an exceptionally fine condition, an adverse report being the exception. Some correspondents report the best outlook in years.

The government report on the condition of winter wheat December 1 put the condition at 94.1 on an area of 31,341,000 acres, which is .6 per cent larger than in 1904. The condition figure compares with 82.9 in 1904, 86.6 in 1903 and a ten-year average of 91.5. The winter rye condition on December 1 was 95.4, as compared with 90.5 on December 1, 1904, 92.7 in 1903 and 95.8 December average of the last ten years.

The Ohio report for December places the corn crop at 109,431,439 bushels. This is the first report of the year giving an estimate of the production of corn in bushels. Although the corn area this year was 127,460 acres less than the original area reported by the township assessors for the harvest of 1904, the total production for the state exceeds that crop by 17,347,991 bushels. This is due to the high average yield per acre, which was more than seven bushels per acre greater than last year. Excessive rains delayed planting, and the crop generally was late, but with the excellent weather conditions prevailing, it was cribbed in good condition. Wheat also shows a gain of one point over the fine conditions reported a month ago.

Reports come in of corn spoiling in the field in Kentucky and some parts of southern Illinois where there has been excessive rain.

THE MAN BEHIND THE GUN.



—Chicago Chronicle.

GRAIN IMPROVEMENT AND CORN BREEDING.

[A paper by Edward M. East, M. S., University of Illinois Agr. Exp. Station, read at the annual meeting of the Illinois Grain Dealers' Association.]

[Continued from August Number, p. 106.]

SAMPLES FOR ANALYSIS.—In order that the breeder may know what he has accomplished in his work of mechanical selection, the Experiment Station offers to analyze for any Illinois farmer who wishes to improve the quality of his corn by breeding according to these directions and who agrees to make the best selection of seed possible, two composite samples representing each of the two lots of ears; that is, the selected lot and the rejected lot.

One composite sample should be made by taking 10 average kernels from each of the selected ears (96 ears preferred), and another sample should be made by taking 10 average kernels from each of the rejected ears (100 ears or more). Each of these two samples should be put in a separate sack, properly labeled, and sent to the Plant Breeding Laboratory, Agricultural Experiment Station, Urbana, Ill.

Of course, if the breeder desires to breed for physical type and increased yield only, then no chemical analysis is needed, and all that is necessary to begin work is to select the 96 most nearly perfect ears obtainable for the breeding plot.

SIZE OF BREEDING PLOT.—The best number of ears to use in a breeding plot is as yet an unsettled question. There are several conflicting factors entering into the consideration. On the one hand, the smaller the number of ears taken, the better can be the selection of the seed planted; while, on the other hand, the larger the number of breeding rows to choose from, the stricter can be the selection of seed for the next crop. Then, again, there is undoubtedly a danger of evil effects from too close inbreeding, by the use of too small a number of ears, as will be shown later.

From our present knowledge we believe that 96 ears is a safe number to use, so far as inbreeding is concerned, and this is the number that we suggest in these directions, it being understood that alternate rows are to be detasseled and all seed corn selected from detasseled rows.

PLANT BY THE ROW SYSTEM.—The 96 selected ears are planted in 96 separate rows. These rows should be at least 100 hills long, but they may well be 40 rods long, as the amount of seed will usually permit this.

It is recommended that these 96 seed ears be numbered from 1 to 48 and from 51 to 98, the numbers 49 and 50 being omitted; also that ears 1 to 48 be planted in one-half of the plot, and ears 51 to 98 be planted in the other half, preferably end to end with the first half, leaving one row unplanted to make the line between rows 24 and 25 and between 74 and 75, that is, between quarters.

In this way row 51 (planted with seed from ear 51) is a continuation of row 1 (planted with seed from ear 1), and the two rows may extend 80 rods, across a 40-acre field. The breeding plot can be planted with a corn planter, although it will require some time and patience, and if the planter is an edgedrop it will be necessary to put a suitable cone or inverted funnel in each seedbox, so as to keep the small amount of corn to the outside.

The breeding plot should be well protected from foreign pollen, by being planted as far away as possible from other varieties of corn.

DETASSELING.—From the data which we have secured and are securing upon the subject, we now strongly recommend that every alternate row of corn in the breeding plot be completely detasseled before the pollen matures, and that all of the seed corn to be taken from the plot be selected from these 48 detasseled rows. This method absolutely prohibits self-pollination or close pollination of the future seed. By self-pollination is meant the transfer of pollen from the male flower (tassel) of a given plant to the female flower (silk) of the same plant; and by close pollination is meant the transfer of pollen from the male flower of one plant to the female flower of another plant in the same row, both of which grew from kernels from the same seed ear. It is recommended that no plants in any of the rows which appear imperfect, dwarfed, immature, barren or otherwise undesirable should be allowed to mature pollen. Occasionally an entire row should be detasseled because of the general inferiority of the row as a whole. Detasseling is accomplished by going over the rows as many times as may be necessary, and carefully pulling out the tassels as they appear. Indeed, great care should be exercised in this part of the work, in order not to injure the plants and thereby lower the yields. The tassels should not be cut off, as this produces an external injury, and at the same time the stalk is often deprived of several undeveloped leaves. But the tassel should be allowed to develop far enough so that it can be separated alone

at the top joint by a careful pull. It is now fully determined that the detasseling of the breeding rows is necessary. This insures cross pollination, and markedly increases the yield of succeeding crops.

DANGERS OF INBREEDING.—The direct reason for the precautions regarding inbreeding are clearly illustrated in the following table:

TABLE 4.
Effects of Detasseling in Corn Breeding. Actual Yields, Bushels per Acre.

| Corn Row No. | 1902 Crop. | | | 1903 Crop. | | | 1904 Crop. | | |
|-----------------------------|------------|-------------|-----------|-------------------|-------------|-----------|-------------------|-------------|-----------|
| | Tasseled. | Detasseled. | Increase. | Tasseled. | Detasseled. | Increase. | Tasseled. | Detasseled. | Increase. |
| 1-2..... | 82 | 74 | -8 | 63 | 60 | -3 | 82 | 91 | 9 |
| 3-4..... | 83 | 84 | 1 | 51 | 71 | 20 | 76 | 87 | 11 |
| 5-6..... | 75 | 83 | 8 | 54 | 70 | 16 | 77 | 100 | 23 |
| 7-8..... | 86 | 86 | 0 | 61 | 76 | 15 | 83 | 90 | 7 |
| 9-10..... | 79 | 86 | 7 | 59 | 70 | 11 | 76 | 89 | 13 |
| 10-12..... | 81 | 89 | 8 | 55 | 68 | 13 | (57) ^a | 92 | (35) |
| 13-14..... | 85 | 88 | 3 | 69 | 77 | 8 | 82 | 97 | 15 |
| 15-16..... | 78 | 85 | 7 | (37) ¹ | (78) | (41) | 77 | 89 | 12 |
| 17-18..... | 85 | 81 | -4 | 66 | 74 | 8 | 93 | 96 | 3 |
| 19-20..... | 81 | 89 | 8 | 64 | 67 | -3 | 83 | 89 | 6 |
| 21-22..... | 86 | 89 | 3 | 75 | 74 | -1 | 79 | 79 | 0 |
| 23-24..... | 88 | 84 | -4 | 57 | 72 | 15 | 80 | 96 | 16 |
| Average High-Protein Plot.. | 83 | 84 | 1 | 62 | 72 | 10 | 82 | 92 | 10 |
| Average Low-Protein Plot.. | 61 | 57 | -4 | 78 | 93 | 15 | 69 | 81 | 12 |
| General Average | 72 | 71 | -1 | 70 | 83 | 13 | 76 | 87 | 11 |
| 1. Stand 51 per cent. | | | | | | | | | |
| 2. Stand 64 per cent. | | | | | | | | | |

This table represents the actual yields of the first 24 rows of a breeding plot which has been grown for three years. The even numbered rows have all been detasseled, and for each year's seed the best ears from the ten best-yielding tasseled rows have been used to plant tasseled rows, and the best ears from the ten best-yielding detasseled rows have been used to plant the detasseled rows. In this manner the effect of inbreeding has been cumulative from year to year. The average of the plot is given, rejecting all stalks below 80 per cent, which might have distorted the result. The results marked from low-protein plot are from a plot in which this experiment was duplicated, but which was selected for low protein. The general average of an increase of 13 bushels in the second year and of 11 bushels in the third year, due to detasseling, is very striking.

PLAN OF PLANTING.—It is due to this data that there has been formed a plan of planting which is regarded as guarding, to the greatest extent possible, from inbreeding or close breeding. There can be no inbreeding because all seed is taken from a detasseled row, as explained before. Moreover, there can have been no deterioration of the seed furnishing pollen because in all previous generations it has been detasseled.

The breeding plot is considered by quarters. Each quarter contains 24 rows and each row is planted with corn from a separate seed ear. All even-numbered rows are detasseled and seed for the next year's breeding plot is taken from the six best-yielding detasseled rows in each quarter, four ears being taken from each selected row, making 96 ears in all.

For convenience we use the term "sire seed" or "sire ears" to designate the ears which are to be planted in odd-numbered rows to produce tassels (the male flowers) and to furnish pollen; and we use the term "dam seed" or "dam ears" to designate the ears to be planted in the even-numbered rows, to produce future seed ears. Of the four seed ears taken from each selected field row, two are used for sire seed and two for dam seed.

The dam seed ears for each quarter are ears which grew in the same quarter, while the sire seed is always brought from another quarter. For the first quarter (rows 1 to 24), sire ears are brought from the fourth quarter. For the second quarter, sire seed is brought from the third. In each of these cases sire seed is carried diagonally across the breeding plot. For the third quarter sire seed is brought from the first quarter, and for the fourth, from the second, the sire seed being carried lengthwise of the breeding plot in these cases.

There is a definite order of planting for "even years" and another definite order for "odd years." Thus, in the first quarter, the even-numbered rows are planted in ascending order, with dam seed selected from rows: 2, 6, 10; 4, 8, 12 + 2, 6, 10; 4, 8, 12; for planting the odd-numbered rows in the first quarter: 76, 84, 90; 80, 86, 92; 76, 84, 90, which are ears taken from the fourth quarter.

Thus we have both the dam and sire seed ears for the first quarter. The seed ears are arranged for each quarter of the breeding plot in a similar manner by substituting in regular ascending order the actual numbers of the best-yielding rows, as in the example given, carrying both sire and dam

seed to the proper plot, as spoken of above.

This method is explained in detail in Bulletin 100 of the Illinois Experiment Station, which will be sent to anyone requesting it.

SELECTION OF FIELD ROWS AND SEED EARS.—As the crop matures, the corn from each of the detasseled breeding rows is now harvested. First, all of the ears on the row which appear to

be good ears and which are borne on good plants, in a good position, and with good ear shanks and husks, are harvested, placed in a bag, with the number of the row, and finally weighed, together with the remainder of the crop from the same row. No seed ears should be taken within two or three rods of the inside ends of the rows. The total weight of ear corn which every detasseled row yields should be determined and recorded, for the yield is the primary factor in determining the rows from which all of the ears for the next year's seed selection must be taken. Each lot of ears from each of the detasseled rows, and finally each single ear of the 96 seed ears ultimately selected is kept labeled with the number of the row in which it grew and finally with its own ear number, also, and permanent records are made of the number and the description of the ear, the performance record of the row, etc., so that as the breeding is continued an absolute pedigree is established, on the female side, for every ear of corn which may be produced from this seed so long as the records are made and preserved. We also know absolutely that we have good breeding on the male side, although the exact individual pedigree of the males cannot be known and recorded.

This description of corn breeding methods will, I think, give some idea of the general methods of all plant breeding. Numerous other experiments in progress at Illinois and elsewhere have shown conclusively that with correct details of methods and by perseverance in them, practically any change within reason can be effected in plant forms within a reasonably short length of time. The laws upon which this all depends may be summed up in two statements, which at first glance seem rather paradoxical:

(1) Variation, which causes the production among plants, along with many average plants, a few more nearly like those sought and a few more nearly opposite.

(2) Heredity, which enables us to produce from a few choice plants a great many which do not return to mediocrity, but resemble their more aristocratic parents.

AMERICAN AND RUSSIAN WHEAT CROPS.

The two striking facts in the world's grain trade situation are the respective positions of this country and of Russia in the wheat market. It is possible that the changes from last year, in these two directions, will exactly offset each other. Last year the world's crop of wheat was with one exception (1903) the largest on record. It was 217,000,000 bushels greater than that of 1901; this notwithstanding the fact that our own country's crop of 1904 was 196,000,000 bushels smaller than that of 1901. This decrease was offset by the other fact that Russia raised 244,000,000 bushels more last year than it did three years before.

The other day, says the New York Evening Post, two estimates were current in the grain trade. One was that our crop would this year be 700,000,000 bushels, thus running 146,000,000 bushels above 1904; the other that Russia's yield promises a decrease of 136,000,000 bushels from last year. If both predictions were to be fulfilled,

and production of other countries were to remain unchanged, the consuming world would be in much the same position as it was last year, but the United States would have the valuable surplus to sell abroad that Russia had in 1904.

Estimating both crops for this season on the basis described, the following curious offsetting movement may be traced for some years back:

| | United States, Bushels. | Russia, Bushels. | Both, Bushels. |
|-----------|----------------------------|---------------------|-------------------|
| 1905..... | 700,000,000 | 570,000,000 | 1,270,000,000 |
| 1904..... | 552,400,000 | 706,600,000 | 1,259,000,000 |
| 1903..... | 637,800,000 | 662,000,000 | 1,299,800,000 |
| 1902..... | 670,000,000 | 645,400,000 | 1,315,400,000 |
| 1901..... | 748,400,000 | 461,900,000 | 1,210,300,000 |

SEEDS

At the close of navigation there were only about 500,000 bushels of flax seed in store at Duluth, Minn.

During the past two years the city of Claremont, S. D., has become an important primary market for millet seed.

The annual distribution of free seeds by the Department of Agriculture was begun December 1. About 38,000,000 packages will be sent out.

The New Ulm Seed Co., at New Ulm, Minn., is rushing to complete its new building. The company has recently installed a ten-ton scale and is waiting the arrival of machinery.

Henry Nungesser & Co., New York, seed merchants, have just issued a new edition of their Wholesale Blue List, with prices of American and imported grass and clover seeds.

The Toledo Seed Co. has been incorporated at Toledo, Ohio, with a capital of \$50,000. The incorporators are L. Thompson, Herman Phillips, K. Matheers, C. Friedman and U. G. Denman.

In their November report R. Liefmann Sons, of Hamburg, Germany, state that continuous rains have hurt a good deal of red clover which was still in the fields. The trade in alfalfa is very slow and prices are declining.

The Bluegrass Seed Factory and Warehouse of David S. Gay, at Winchester, Ky., was recently burned, with most of its contents. Besides machinery it contained about \$15,000 worth of seed. The loss is about \$25,000; partly insured.

Congressman Gilbert has a new plan of government garden seed distribution. He believes that in many cases the seeds are sent to persons who do not desire them and his request is that all persons wishing the seeds send him a postal card at Washington.

The U. S. Department of Agriculture has issued a circular on "Adulteration of Alfalfa and Red Clover Seed." The information given in the circular was obtained by examining seeds bought in the markets. Out of 658 samples examined twenty-two were found to be adulterated.

The Toledo, Ohio, Market Report states that when making shipments of seeds to this market dealers should use only desirable and merchantable bags. It says: "Some bags are not suitable or safe to ship seed in. Do not use 'any old kind of a bag' simply because it is a bag. More uniformity should be used. Bags other than kinds specified will be priced as to their relative value for seed uses only. Bags torn, dirty, marked or otherwise disfigured will have value placed upon them by the seed inspector."

INSURANCE ON GRAIN.

An industry that has sprung up and grown to enormous proportions within the last ten years is the branch of insurance known as grain fire insurance. Umatilla County, Oregon, which is accredited with the growing of 5,000,000 bushels of wheat, or 1 per cent of the world's wheat crop, spends annually between \$12,000 and \$15,000 for the protection of the grain fields and the harvested grain until it is marketed.

Ten years ago grain insurance was practically unknown. One of the large insurance companies inaugurated this branch, and so successful were they in the branch that almost every recognized company now has agents driving through every wheat-growing section. When first introduced the farmers were suspicious and failed to patronize it. The insurance is so complicated that a few years were necessary for them to become thoroughly initiated in the matter and to fully understand. At this time it is estimated that between one-half and three-fourths of the grain in this county comes under that insurance, and the great

premiums mentioned above are paid over for the protection offered.

The method provides that if a man owns a field of wheat which will yield 60 bushels to the acre, he may secure on it insurance to the amount of \$16.50 an acre, while the grain is standing, in the stack or in the sacks in the fields waiting to be hauled to the warehouse; when the wheat is transferred to the warehouse, an additional \$2 may be added without charge, as the danger of fire is lessened when out of the field.

When a land owner has an interest in the crop the land owner is awarded \$6.25 an acre as his portion of the insurance, if there should be a loss, with the renter the remainder. After the wheat is sacked an additional \$2 is added to the renter's insurance, with no additional money for the land owner.

Grain insurance is written for any length of time, but generally for 90 days, with the privilege of canceling the policy at any time. The rate of the premium is 4 per cent, short rate, while in the field, with the privilege of canceling as soon as the grain is in the warehouse.

The losses to the insurance companies are considerable through this channel of insurance, as each year fire claims about a set number of fields. Last year not less than six insured fields were destroyed, the loss ranging from a few hundred dollars up to \$1,000. Fires from smut explosions, sparks from the engines, and carelessly thrown-down matches or cigarettes are common. Care is exercised through harvest, but owing to the extreme dryness of the stubbles and surrounding grass in the lanes and pasture fields, fires are unavoidable.—Spokane (Wash.) Chronicle.

FACTS AND FIGURES

The big steamer Augustus B. Wolvin on November 27 loaded 350,000 bushels of No. 2 durum wheat for Buffalo en route to Mediterranean ports. This was the largest cargo of grain ever floated on fresh water. The rate was 4 cents, including storage on board for some time at Buffalo. On December 2 the ship was reported aground on Silver Isle, in Lake Superior.

New York bank statement a bad one, with reserves below the legal limit. Will they be censured? Not at all. The Iowa secretary of the treasury will deposit government money to help out "the pools" and speculators who are booming watered stocks, while the Iowa secretary for agriculture seems disposed to harpoon those who endeavor to lift the price of farm products. In its last analysis the difference is less than supposed, because cheap cotton and breadstuffs invite their exportation, keeping foreign exchange easy and preventing the export of gold—so much dreaded by Wall Street. The Eastern booster of chromos hardly knows which secretary most to admire, nor which helps him most.—Pope & Eckhardt Co., December 9.

At a banquet to be given by the corn growers of Nebraska to Secretary of Agriculture Wilson at Lincoln on December 15, the following menu will be served:

- Corn Soup.
- Popcorn Float.
- Corn Relish.
- Hulled Corn with State Farm Cream.
- State Farm Corn Fed Beef, a la Challenger.
- Granulated Hominy Grits.
- Croquettes en Surprise.
- Aunt Chloe's Corn Pone.
- Reid's Yellow Dent Johnny Cake with Milk.
- Baked Indian Corn Pudding.
- Cream Corn Sauce.
- Molded Corn Ice Cream.
- Cornmeal Wafers.
- Golden Corn Cake.
- Corn Coffee.
- Nebraska Corn Husk Cigarettes.

What has paralyzed speculation? General public has been indifferent to grain and stocks for several months. Many think the exposure of high finance grafters the cause. It shows they have been running a big bunco game. Ryan says he bought Hyde's stock to avert a panic. There would have been one if life insurance policies were payable upon demand, like deposits in national banks. If he had said he bought the stock to control the money of the Equitable, the public would have believed him. Think of J. P. Morgan taking a gold brick for many millions. It shows how careless Wall Street does business. Tight money there will continue for some weeks. Morgan wants the government to help. Rockefeller interests do not. The financial giants do not always work together. There is no muddy water in grain, but speculation in it has been very small. Public is amazed at the high finance methods.—C. A. King & Co., Toledo.

LATE PATENTS

Issued on November 14, 1905.

Bag Holder and Spreader.—Herbert F. Ballou, Winchendon, Mass. Filed December 20, 1904. No. 804,199. See cut.

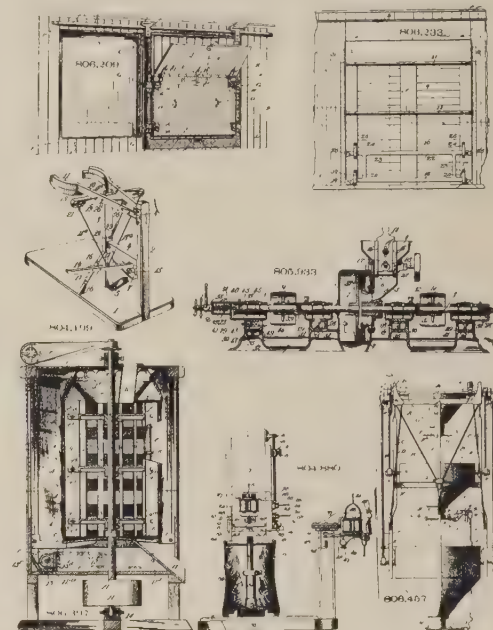
Elevator.—Charles D. Seeberger, Yonkers, N. Y. Filed January 20, 1903. No. 804,560.

Issued on November 21, 1905.

Automatic Weighing Apparatus.—John L. Peppard, Kansas City, Mo. Filed June 28, 1905. No. 804,880. See cut.

Issued on November 28, 1905.

Apparatus for Purifying, Conditioning and Drying Grain.—Harry J. Caldwell and James R. Barr,



Earl Park, Ind. Filed September 2, 1902. No. 805,709.

Grinding Mill.—Harry C. Robinson, Muncy, Pa. Filed February 27, 1903. No. 805,933. See cut.

Issued on December 5, 1905.

Conveyor.—Paul Burchardt, Kramfors, Sweden. Filed September 14, 1904. No. 806,103.

Grain Door.—Thomas C. Thomas, Peoria, Ill., assignor of one-half to Daniel R. Sheen, Peoria, Ill. Filed August 27, 1904. No. 806,209. See cut.

Grain Doors for Cars.—William L. Aurand, Milford, Ill. Filed April 5, 1905. No. 806,233. See cut.

Grain Scourer.—John B. Cornwall, Moline, Ill., assignor to Barnard & Leas Manufacturing Co., Moline, Ill. Filed February 21, 1905. No. 806,397. See cut.

Weighing Machine.—Emil Staheli, Dubuque, Iowa, assignor to Isaac J. Cushing, Dubuque, Iowa. Filed August 8, 1904. No. 806,441.

Automatic Weighing Machine.—Henry C. Bowlus, Springfield, Ohio, assignor to the Bowlus Automatic Scale Co., Springfield, Ohio. Filed May 28, 1904. No. 806,457. See cut.

Separating Apparatus for Alfalfa Grinders.—George H. Payne, Omaha, Neb. Filed April 15, 1905. No. 806,488.

Radial Car Puller Sheave.—Frederick I. Friedline, Little Rock, Ark. Filed January 12, 1905. No. 806,534.

Screw Conveyor.—George L. Chatfield, Indianapolis, Ind. Filed September 11, 1905. No. 806,643.

Rice hulls are condemned by the Pennsylvania Agricultural Department as dangerous feed for cattle.

SALES OF RICHARDSON AUTOMATIC SCALES.

Following is a list of recent sales of the Richardson Automatic Scales: Brook-Rauch Mill & Elevator Co., Little Rock, Ark.; Columbia Roller Mills, Eversgrove, Pa.; Dazey-Moore Grain Co., Fort Worth, Texas; Standard Milling Co., Houston, Texas; Laurence Feed Co., Crowley, La. (2); Allis-Chalmers Co., Milwaukee, Wis.; Edinburg Milling Co., Edinburg, Ind.; Bishop Hominy Co., Sheldon, Ill.; Strong & Northway Mfg. Co., Minneapolis,

Minn. (5); E. C. Buchanan & Co., Memphis, Tenn.; Shelton Mills, Chattanooga, Tenn.; McCue & Wright Milling Co., Bluefield, W. Va.; Morris Mill Co., Morris, Minn.; W. J. Jennison & Co., Appleton, Minn.; Bridgewater Milling Co., Inc., Fredericksburg, Va.; Intermountain Milling Co., Salt Lake City, Utah; Blair Milling Co., Atchison, Kan.; George Urban Milling Co., Buffalo, N. Y.; St. Anthony & Dakota Elevator Co., Minneapolis, Minn.; Barnard Mfg. Co., Spokane, Wash. (2); Husted Mill & Elevator Co., Buffalo, N. Y.; Empire State Mills, Syracuse, N. Y.; Burrell Engineering & Construction Co., Chicago, Ill.; Red River Milling Co., Fergus Falls, Minn.; Sam W. Weidler & Co., Cincinnati, Ohio; Hubbard Milling Co., Mankato, Minn.; Nordyke & Marmon Co., Indianapolis, Ind. (2); Marshall Milling Co., Marshall, Minn.; Spokane Flour Mills Co., Spokane, Wash.; American Hominy Co., Indianapolis, Ind.; Hastings Milling Co., Owatonna, Minn.; New London Milling Co., Willmar, Minn.; Westbrook, Gibbons & Co., Omaha, Neb.; The Pieser-Livingston Co., Chicago, Ill.; Hankey Milling Co., Petoskey, Mich.; Aiken-Ersine Milling Co., Evansville, Ind.; Troy Roller Mills Co., Troy, Tenn.; Empire Mills Co., Columbus, Ga.; Washburn-Crosby Co., Buffalo, N. Y. (2); Oakley Milling Co., Oakley, Kan.; Barnard Machinery Co., Enterprise, Kan.; Red Star Mill & Elevator Co., Wichita, Kan.; Phelps & Sibley Co., Cuba, N. Y.; David Stott, Detroit, Mich. (2); Colton Bros. Co., Bellefontaine, Ohio.

For Sale

[Copy for notices under this head should reach us by the 12th of the month to insure insertion in the issue for that month.]

MONEY IN YOUR POCKET.

If you want to change that second-hand machine into money advertise it in this department. Or if you have a grain elevator to sell or rent, or wish to buy, make your wants known through these columns.

ELEVATORS

FOR SALE.

If you are in want of a good elevator, cheap, doing a good business in all lines, call on
J. F. CARTWRIGHT CO., Davison, Mich.

FOR SALE.

Two small elevators, 26 acres land and desirable dwelling property in good grain territory in Eastern Indiana. Address

LOCK BOX 15, Modoc, Ind.

FOR SALE.

In northwestern Iowa, a 15,000-bushel elevator equipped with modern machinery and doing a good business. Good reason for selling. Address

LOCK BOX 713, Sioux Falls, S. D.

FOR SALE.

Elevator, 12,000 bushels' capacity, 8-room residence and new barn. Good flour and feed trade. Heart of corn belt. One warehouse and one corn crib, three dumps in elevator, one three-pair roller mill and one Bowsher grinder for grinding feed, one cylinder corn sheller, one suction cleaner, two fanning mills, one 40-horsepower steam engine. All in good condition. Price given on application. Address

BOX 4, De Soto, Iowa.

FOR SALE.

Elevator in the corn and oat belt of Iowa. Cribbed house, capacity 80,000 bushels; good cribs for 20,000 bushels ear corn; 5 acres of land. Also handles coal, feed, tile, and all building material except lumber. Big crop to handle this year. Price, \$12,000. Doing a profitable business. Reason for selling, poor health. Address

IOWA, Box 9, care "American Elevator and Grain Trade," Chicago, Ill.

FOR SALE.

Good elevator, in live Wisconsin town, surrounded by rich farming country; 25,000 bushels' capacity. Might exchange for western land. Address

WESTERN LAND SECURITIES CO., 143 Endicott Arcade, St. Paul, Minn.

GRAIN AND SEEDS

WRITE OR TELEGRAPH.

White Wheat and Utah Alfalfa seed for sale. If in need of either, write or telegraph

SAM WILLIAMSON, Salt Lake City, Utah.

GET OUR PRICES.

Kaffir Corn, Cane Seed, Alfalfa seed and Hard Milling Wheat for sale. Get our prices.

L. H. POWELL & CO., Wichita, Kansas.

WESTERN HEADQUARTERS

For Alfalfa, Clover, Timothy, Millet, Sorghum and Kaffir Corn. Car lots. Write for prices.

MISSOURI SEED CO., Kansas City, Mo.

BARGAIN IN VALUES.

Red, White and Alsike Clover Seed at bargain values. Write for samples.

MILWAUKEE PRODUCE CO., 123-125-127 West Water St., Milwaukee, Wis.

MACHINERY

INVESTIGATE THIS.

Cheapest power on earth. Write for particulars. H. W. TUTTLE, 153 South Desplaines Street, Chicago.

FOR SALE.

A 25-horsepower steam engine, in first-class condition. Address

THOMAS A. SMITH, Traer, Iowa.

FOR SALE.

One stationary 25-horsepower engine and boiler, in first-class condition.

L. SCHNELL, St. Charles, Minn.

FOR SALE.

Lambert Gasoline Engine, 20 horsepower, in fine condition. For particulars, address

A. J. MONROE, Arthur, Ill.

FOR SALE.

Portable dump for sale. Will handle any kind of grain well and quickly. Just the thing for cribbing corn. Address

WOODBURY & FILES, Muncie, Ind.

FOR SALE.

Gasoline engines; one 54-horse Fairbanks-Morse; one 28, one 16, one 12, 2, 8 and 25 horsepower Sterling Charter. All sizes and prices in small sizes.

A. H. McDONALD, 38 W. Randolph St., Chicago.

FOR SALE.

New 2-horsepower horizontal gasoline engines; electric igniters, \$95 each.

Also 2½-horsepower Weber, used only 10 days, \$75.

H. PETTINGER, 22 South Canal St., Chicago.

GASOLINE ENGINES FOR SALE.

| | | |
|------------------------------------|--------------------|--------|
| 3 HP Otto, \$85. | 4 HP Colborne..... | \$ 95. |
| 6 HP Webster, \$175. | 8 HP Otto..... | 225. |
| 10 HP Otto with pump attached..... | | 400. |
| 12 HP Webster | | 225. |
| 15 HP White & Middleton..... | | 375. |
| 35 HP Otto, \$600. | 60 HP Otto..... | 1,200 |

COLBORNE MFG. CO., 35 E. Indiana St., Chicago.

SCALES

SCALES FOR SALE.

Scales for elevators, mills, or for hay, grain or stock; new or second-hand at lowest prices. Lists free.

CHICAGO SCALE CO., 299 Jackson Boulevard, Chicago, Ill.

"THE STANDARD" SCALES.

For all purposes. Portable, Wagon, Hopper and Track Scales. Guaranteed durable and accurate; quality higher than price. Not in the trust.

THE STANDARD SCALE & SUPPLY CO., Station U., Chicago, Ill.

Miscellaneous & Notices

[Copy for notices under this head should reach us by the 12th of the month to insure insertion in the issue for that month.]

SECOND-HAND BAGS WANTED.

Any kind, any quality, anywhere. I pay freight. Write for prices.

GEO. T. KING, Richmond, Va.

WANTED.

Names of the principal New York exporters and European importers who are buyers of corn and wheat. Address

E. H. LINZEE GRAIN CO., Hobart, Okla.

WANTED.

We are in the market for one car of best quality mixed feed, one car assorted fancy white middlings and bran; also winter and spring wheat flour and corn.

S. E. & H. L. SHEPHERD CO., Rockport, Me.

GRAIN WANTED

WANTED.

Buckwheat grain wanted. Address

H. H. EMMINGA, Golden, Ill.

GRAIN WANTED.

Wanted—Feed barley and new No. 2 and No. 3 rye.

W. H. SMALL & CO., Evansville, Ind.

WANTED.

We are in the market for alsike, red clover and timothy seed.

HENRY NUNGESSER & CO., 65 Pearl St., New York, N. Y.

HAY WANTED.

GOOD HAY.

Will bring a good price on our market. Send us your next consignment. Our specialty.

ST. LOUIS HAY & GRAIN CO., St. Louis, Mo.

QUICK SALES—PROMPT RETURNS.

If you want these let your hay consignments go to S. G. Fairbank & Co., Richmond, Va. Draft with B-L attached for 75 per cent honored on all shipments.

New Route to Los Angeles.

Daily Tourist Cars via the Salt Lake Route.

Through tourist sleeper to Los Angeles leaves Union Passenger Station, Chicago, 5:15 p. m. every day. Route—Chicago, Milwaukee & St. Paul Railway, Union Pacific and the new San Pedro, Los Angeles & Salt Lake Railroad. Rate for double berth, Chicago to Los Angeles, \$7.

F. A. MILLER,
General Passenger Agent, Chicago.

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SYKES STEEL ROOFING CO.

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WE manufacture all gauges of corrugated iron, either painted or galvanized. We make Patent Cap Roofing, Roll Cap Roofing, "V" Crimped Roofing, Metal Ceilings, etc., etc.

We make a specialty of

Corrugated Iron and Metal Roofing For Grain Elevators

And take contracts either for material alone or job completed. Write us for prices. We can save you money.

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Elkhorn Valley Prairie Hay

C. C. POND & CO.

Contractors and Shippers of all Grades

Write them for delivered prices.

EWING, NEB.

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On All Sales of
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Liberal advances paid and
prompt sales assured. . .
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Specialty

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201 Chamber of Commerce

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C. A. FOSTER

Grain Exchange Building, Cor. Penn Ave. and Tenth St., Pittsburg, Pa.

Established 1878

Wholesale Grain, Hay and Mill Feed

CONSIGNMENTS SOLICITED

References: The Colonial Trust Co., Pittsburg, Pa.

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The Best Market in the World

Our superior facilities and connections with large buyers of HAY and GRAIN enable us to get the best prices. Liberal advances made on shipments.

Daniel McCaffrey's Sons Co. Pittsburg, Pa.

References: Duquesne National Bank. Washington National Bank.

In the one spot 38 years.

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Member: National Hay Association; Pittsburg Grain and Flour Exchange.

207 Grain Exchange Bldg., Pittsburg, Pa.

Reference, Monongahela National Bank

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GOSHEN, IND.

Track Buyers Oats, Ear Corn, Rye, Buckwheat, Hay and Straw

Let us hear from you and we will make you track bids regularly. We are always in the market.

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P V F. H. PEAVEY & CO.

MINNEAPOLIS,

GRAIN RECEIVERS MINN.

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J. R. MARFIELD, Pres. Wm. GRIFFITHS, Vice-Pres. and Mgr.

C. D. TEARSE, Sec'y and Treas.

MARFIELD-GRIFFITHS CO.

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22 Board of Trade, Indianapolis, Indiana

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Let us have your consignments It will pay you to deal with us

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G. C. HOLSTEIN, Sec'y-Treas.

Mohr-Holstein Commission Co.

29 Chamber of Commerce

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ESTABLISHED 1864

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Dumont, Roberts & Co.

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Merchants Exchange DECATUR, ILL.

Consignments Solicited.

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CONSIGNMENTS SOLICITED. Special attention given to the handling of CORN AND OATS.

REFERENCES: Manufacturers' National Bank, Philadelphia, Pa. Union National Bank, Westminster, Md.

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ESTABLISHED 1846

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GRAIN AND CLOVER SEED DEALERS
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SPECIAL MARKET AND CROP REPORTS FREE

BE FRIENDLY

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GRAIN, SEEDS AND FEED

61 Produce Exchange

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CONSIGNMENTS SOLICITED

CASH AND FUTURES

REYNOLDS BROS.

TOLEDO, O.

Buy and Sell Grain

SELL US YOURS

If you don't get our bids, ask for them. Consignments always welcome. Consign us yours.

J. F. ZAHM

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SEND FOR OUR DAILY CIRCULAR; IT'S FREE

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MEMBERS OF GRAIN DEALERS' NATIONAL ASS'N

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SUCCESSORS TO

Redmond Cleary Com. Co.

Established 1854

Incorporated 1887

Grain, Hay, Mill Feed and Seeds

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ESTABLISHED 1875

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Van Tassell Grain Company

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BUYERS and SHIPPERS

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That country trade always pays you
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See the point?

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BUFFALO

W. W. ALDER

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Alder & Stofer

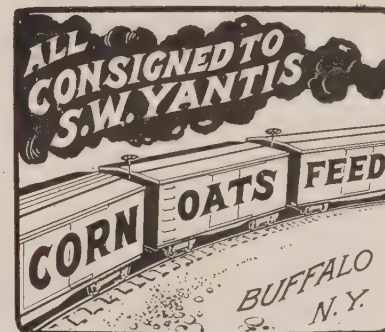
COMMISSION
MERCHANTS

We do not buy any grain, but handle on commission, and solicit your Buffalo consignments.

83 Chamber of Commerce,

BUFFALO

NEW YORK



Consign Your Grain to

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44 Board of Trade, Buffalo, N. Y.

QUICK SALES. IMMEDIATE RETURNS. RELIABLE REPORTS.

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Established 1892

W. E. LEE

49 Chamber of Commerce, Buffalo, N. Y.

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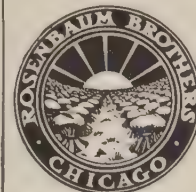
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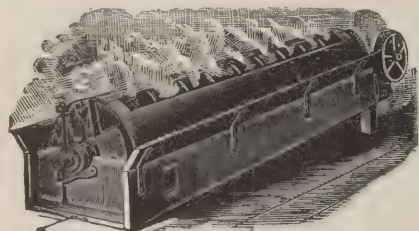
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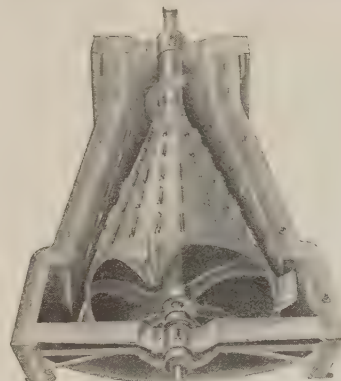
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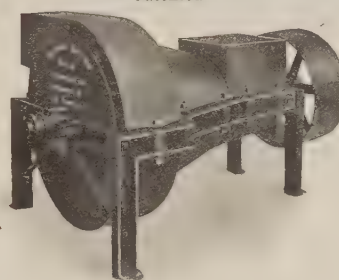
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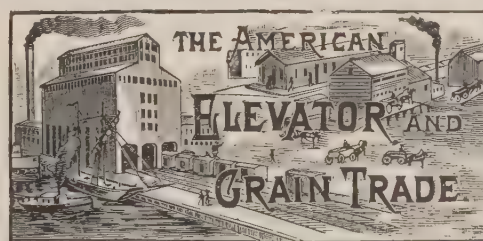
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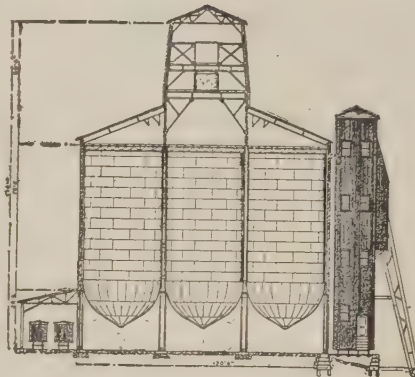
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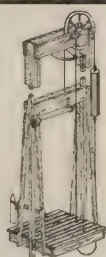
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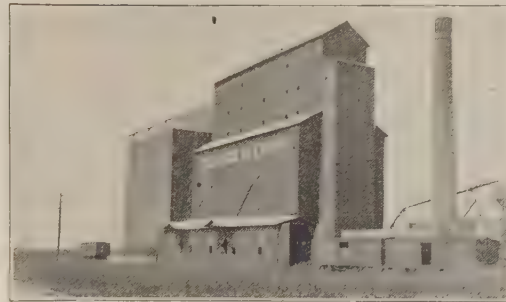
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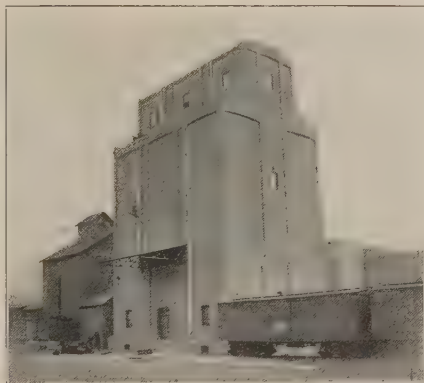
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A Specialty

Country or Terminal Elevators
in any Design or Capacity

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1,000,000-bushel fireproof Grain Elevator constructed of steel, for the Harbor Commissioners of Montreal, Canada.

**Twenty Million Bushels Capacity of Our Construction
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ARE YOU GOING TO BUILD?

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We will be pleased to send you plans,
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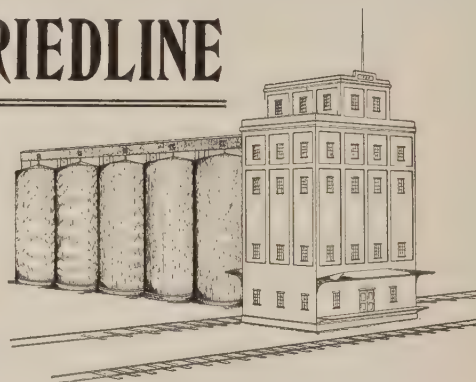
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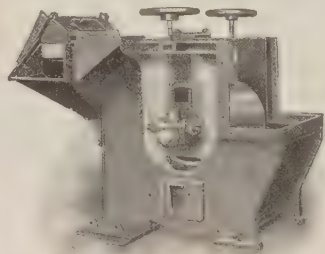


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that has ever been reached in
elevating grain.

This letter tells the story.



16-inch pulley—16-inch face.
NON-CHOKING.

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Gentlemen:—You ought to name your appliance
"The Grain Dealer's Dream," as it certainly does its
work to perfection, and I have heard a dozen ele-
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they could fix their boots so they could not clog,
and that is more than five times what you ask
for a machine that does the trick and elevates
the grain faster than was ever done with the old-
style boot.

I was afraid at first to load the cups full, but
when you wrote me the second time that the boot
should be fed all the grain it would take, I tried it
one day when I had 150 bushels of shelled corn in
the dump, and pulled the gate wide open, and there
certainly was "something doing" for five minutes,
as the cups went up all loaded to overflowing.
Thanking you for prevailing on me to put in
the boot, I am
Yours, CHAS. A. PFUND.

SENT ON TRIAL
506 First Nat. Bank Bldg.
Omaha, Neb.

HALL DISTRIBUTOR CO.

P. H. PELKEY

118 S. Lawrence Avenue - - WICHITA, KAN.

CONTRACTOR FOR
GRAIN ELEVATORS

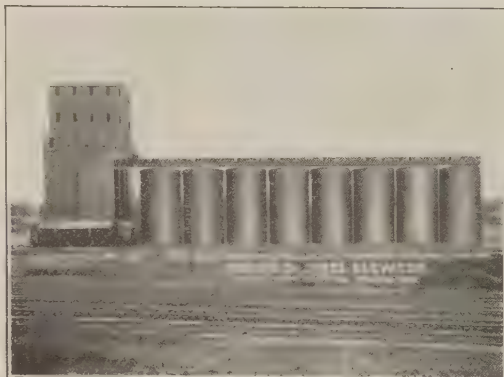
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just completed at Omaha, Neb. **We have the Best Equip-
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*in Wood, Steel
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Plans and specifications for elevators
of all kinds and capacities furnished.

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Modern Grain Elevators

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Furnishes Standard Goods at Right Prices.

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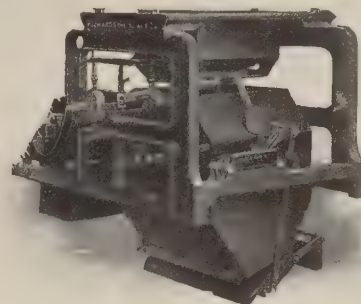
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Nothing! unless it's synonymous with SUCCESS
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*Makes Money
Saves Money*

*Necessary to all up-to-date
grain elevators*

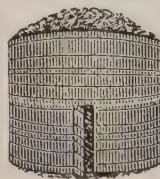
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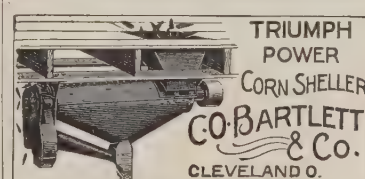
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Cheap and handy. Can
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Field and Lawn Fence,
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CORN SHELLER

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With Reversible Drive Connections.
Permits Carrier to Run in Either Direction.



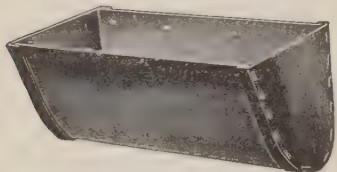
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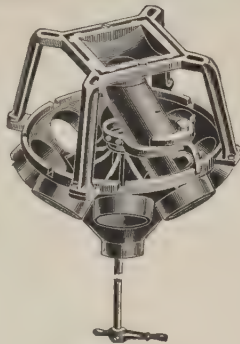
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Suitable for Mills, Elevators, Ear Corn, Cobs, Clay, Ores, Broken Stone, Coal, Sand and other extra heavy substances. General Office and Works: 225 St. Clair St., Cleveland, O., U. S. A.

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6-inch h. 8 ducts.
NON-MIXING

The cost of repairing a burned belt and battered or broken cups, or the difference in the price from a shipment of "mixed grain," will usually more than pay for the installing in your elevator of a

HALL SIGNALING GRAIN DISTRIBUTOR

the only machine in existence that makes it impossible for grain to back up into the elevator head and choke the leg, or grain of different grades or kinds to become "mixed" in distribution. It's a money saver as well as a money earner.

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Something
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Fairbanks Scales

won the Grand Prize at the Louisiana Purchase Exposition, St. Louis, 1904, for the very reason that you ought to use them,

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Fairbanks-Morse Gasoline Engine is the most economical power for Elevator or Mill use. By using it one man can often run the whole elevator.

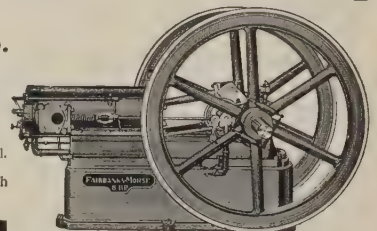
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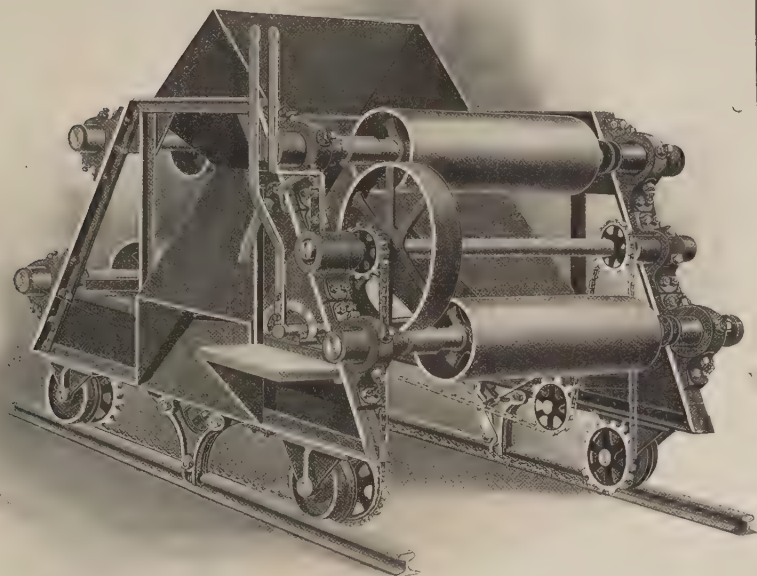
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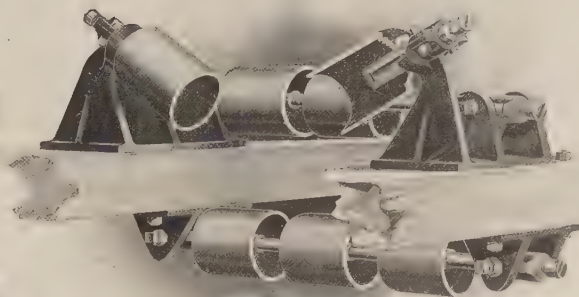
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We manufacture a full line of Trippers, Belt Conveyor Appliances, Power Shovels, Car Pul-
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THE PERFECTION GRAIN DRIER

Just What You Have Been Looking For!

An Apparatus

For Drying All Kinds of Grain
Peas, Rice, Beans, Etc.

There is a great demand for a device that will enable the elevator man to overcome a very great obstacle in successfully storing or marketing his grain. We have reference to that common foe, viz., moisture in the grain. This moisture may be due to the grain being new, the effects of rain, or otherwise, but every elevator operator knows to his sorrow, how it will repeatedly make his best laid plans miscarry. THE PERFECT-ION GRAIN DRIER will place every elevator man in a position to successfully banish all such baneful effects. The conclusion to be drawn from the above is logically as follows:

Install a Perfection Grain Drier and be Master
of the Situation

These Driers Are:

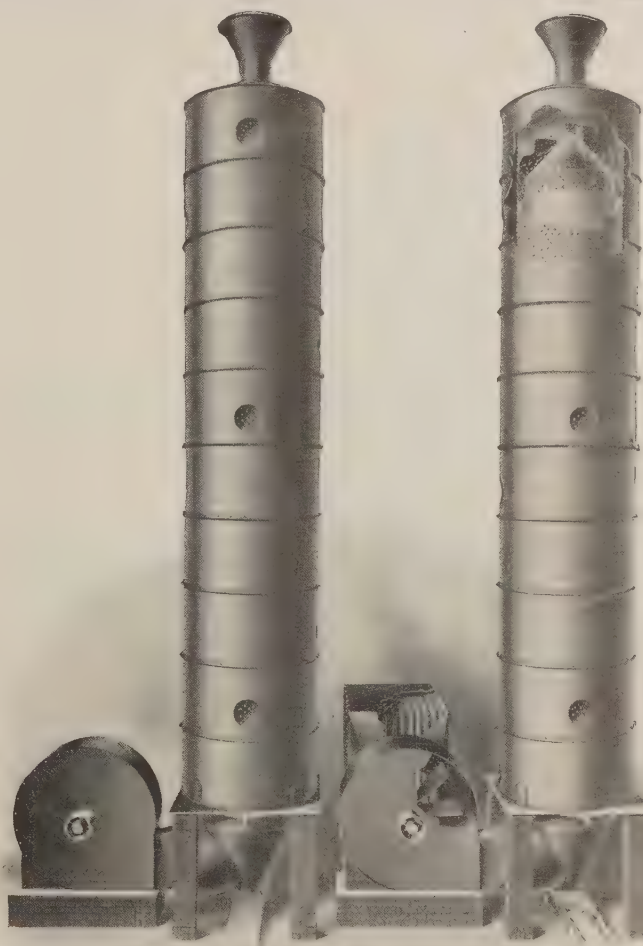
SIMPLE IN CONSTRUCTION—Thus lessening cost.
ECONOMICAL IN OPERATION—Paying for themselves in short time.
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Correct Weights

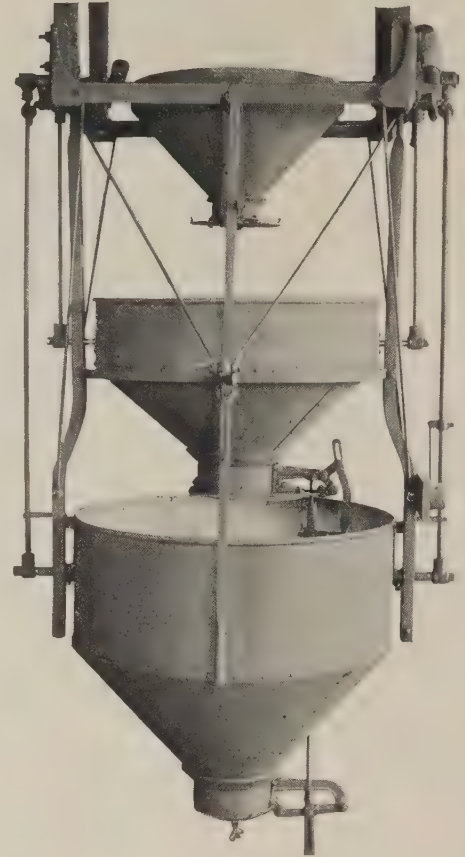
The Bowlus Automatic Weighing Machine will weigh out your grain accurately to the pound, and will dump and register the weight without the services of a weighman. It works automatically and can be adjusted to dump at any weight. Its salient features are

Accuracy
Simplicity
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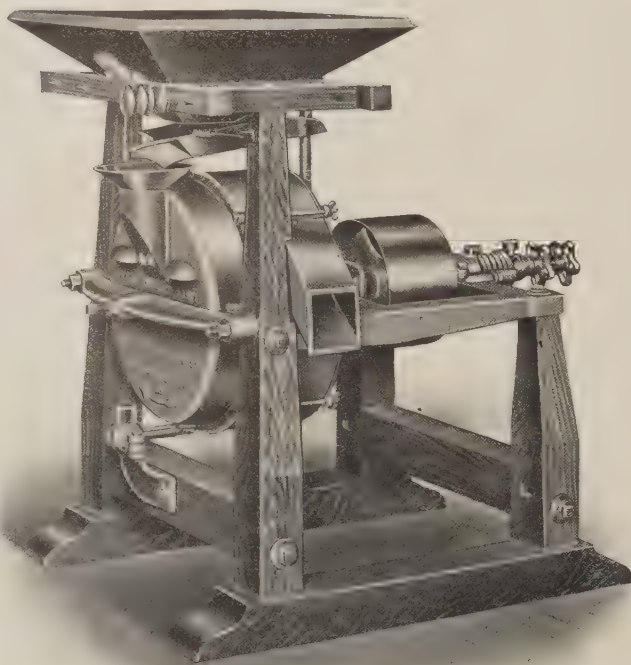
Machine to weigh out 60,000 pounds of any grain per hour goes in space 7 feet high by 4 feet square.

Write for catalog and detailed description

The Bowlus Automatic Scale Co.
Springfield, Ohio, U. S. A.



SIDE VIEW



DO YOU

Do custom grinding? Wouldn't it be to your advantage if you did?

In many cases a good buhr stone mill has made money and has been the means of bringing additional trade to the elevator.

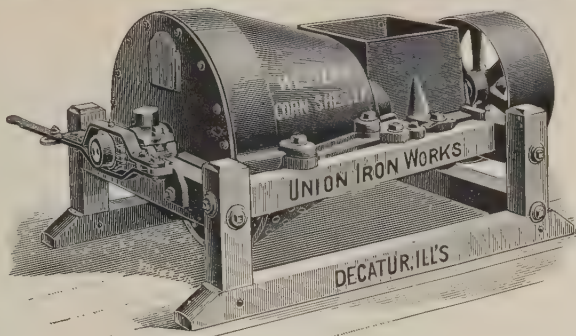
Here is what one of our patrons says, who owns four elevators and is operating a buhr stone mill in each:

OFFICE OF
GEO. C. WOOD, PHOTO-LITHOGRAPHER
ELEVATORS
AT
HEMLOCK, IND. WINDFALL, IND.
NEVADA, IND. CURTISVILLE, IND.
P. O. C. & ST. L. RAILWAY
Windfall, Ind., May 15, 1906

*Nordyke & Marmion Co.
Indianapolis, Ind.
Gentlemen: You may ship me another
22" Frame and Rotation Mill (French Buhr)
Ship to me here at Windfall
This is the first of three mills I have bought
of you since September 1902, one for each Elevator.
Yours Very Truly,
Geo. C. Wood*

Send for our Catalogue, "Book on Mills No. 490"

NORDYKE & MARMON CO.
AMERICA'S LEADING MILL BUILDERS
INDIANAPOLIS, INDIANA



Western Warehouse Sheller

WRITE FOR CATALOG WITH CUTS AND FULL
DESCRIPTIONS TO

UNION IRON WORKS

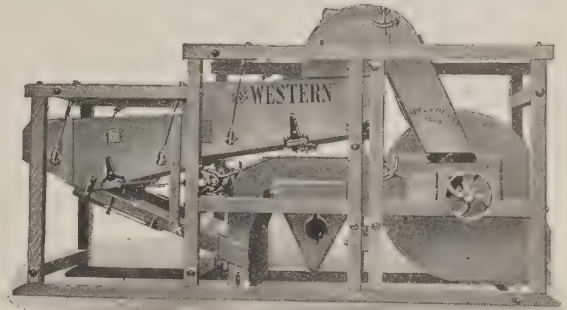
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Are You Building a New Elevator?
Are You Remodeling Your Old One?

IF SO, EQUIP IT WITH

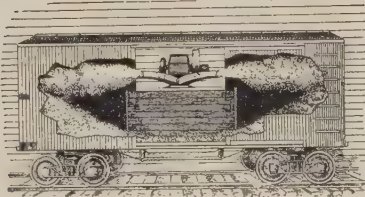
"Western" Machinery

Plans furnished
upon application



"Western" Shaker Cleaner

A GOOD CAR LOADER



Is a necessary part of the equip-
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THE BOSS CAR LOADER

is the best device of its class. Its
installation means a positive sav-
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you will write us to-day we will
send you full particulars and tell
you why you cannot afford to use
any other loader.

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THERE IS NONE BETTER THAN THAT AFFORDED BY WELL
FILLED FIRE BUCKETS

The use of CALCIUM CHLORIDE SOLUTION in place of SALT
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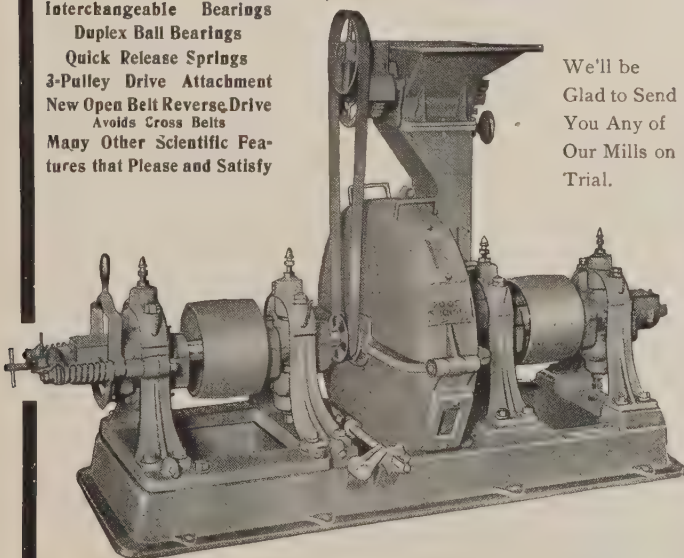
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Exclusive Features

Interchangeable Bearings
Duplex Ball Bearings
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New Open Belt Reverse Drive
Avoids Cross Belts
Many Other Scientific Fea-
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We'll be
Glad to Send
You Any of
Our Mills on
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Fast, Fine Grinding

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sold the Carnegie Steel Co.

Our scientific method of construction combined with
the general excellence of our product is the reason
there is more

**"AMERICAN" TRANSMISSION
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now in service than all other brands.
It stands unchallenged.
"The Best Example of the Rope Maker's Art."

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Rope Drives

We design and install complete rope drives. We are experienced in this line, and drives designed by us are successful. We supply the best grade of Manila rope. Our **Machine-molded sheaves** are perfect in balance, accurately finished and free from flaws injurious to the rope.

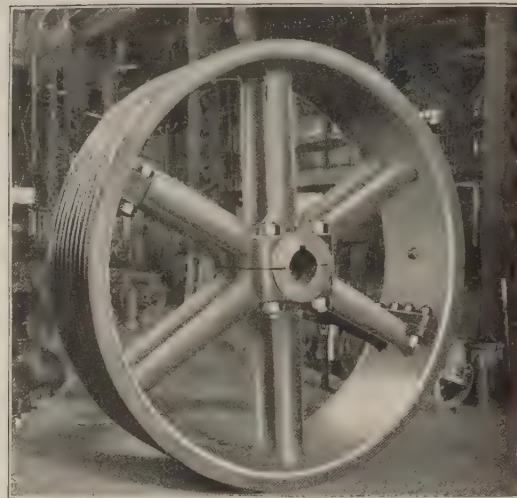
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"Rubber belting taken up twelve (12) times
LEVIATHAN TWICE"

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MACHINERY, BELTING, SUPPLIES

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Good goods and square treatment. Try us.

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The "Eureka" Corn Dryer



If you are handling and exporting corn you can make money rapidly with an

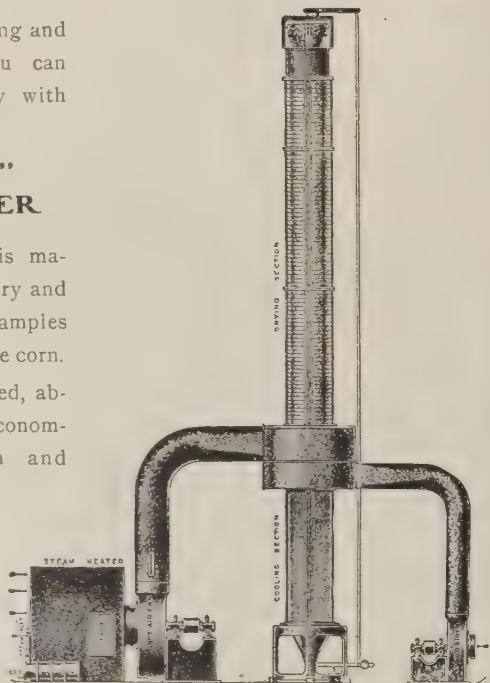
**"EUREKA"
CORN DRYER**

We guarantee this machine to perfectly dry and condition the worst samples of damp and off-grade corn.

It is easily installed, absolutely automatic, economical in operation and moderate in cost.

Many in use. Numerous references upon application.

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EUREKA WORKS

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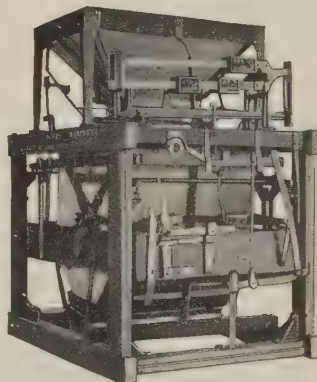
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HAS NO EQUAL

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Weights grain accurately while running into cars, bins or sacks.

Weights recorded. Reliable and durable. Prices reasonable. Sold on approval. You cannot buy a better scale at any price. Write for particulars.

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The Stuhr Grain Purifier Constructing Company

(Not Incorporated)

WE ARE CONTRACTORS *and* BUILDERS of GRAIN PURIFYING PLANTS

And are authorized selling agents for the right to use the only Process Tower ever placed on the market, and covered by patent No. 592,691. And additional patent grants for process applications as advertised up to date are all infringements, for the reason that the original patent contains all the essential points of the so-called process patents as advertised by others. No process application can be successfully made without a Process Tower as covered by patent No. 592,691. These are absolute facts and we invite investigation. We have had practical experience in operating grain elevators and grain purifying plants for years and are therefore well equipped to install satisfactory grain purifying plants on a large or small scale, with all the latest, practical and simple devices necessary in connection with grain elevators to produce the most profitable results.

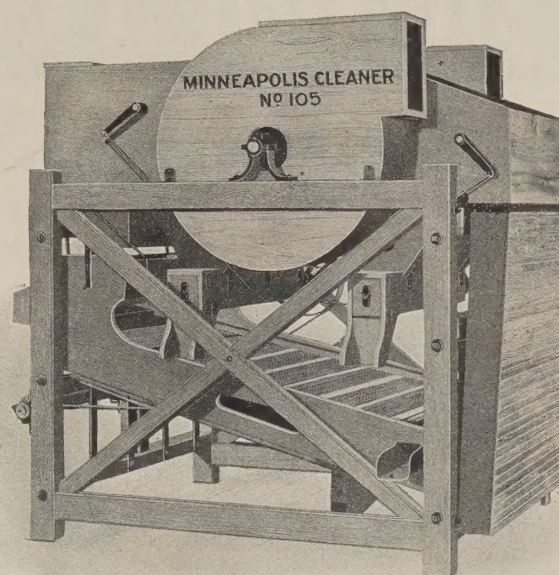
Can we serve you?

For further particulars and terms write to us at
DAVENPORT, IOWA.

D. H. STUHR ————— Manager

PERFECTION

is reached for an Elevator and Warehouse Separator in our Minneapolis No. 105



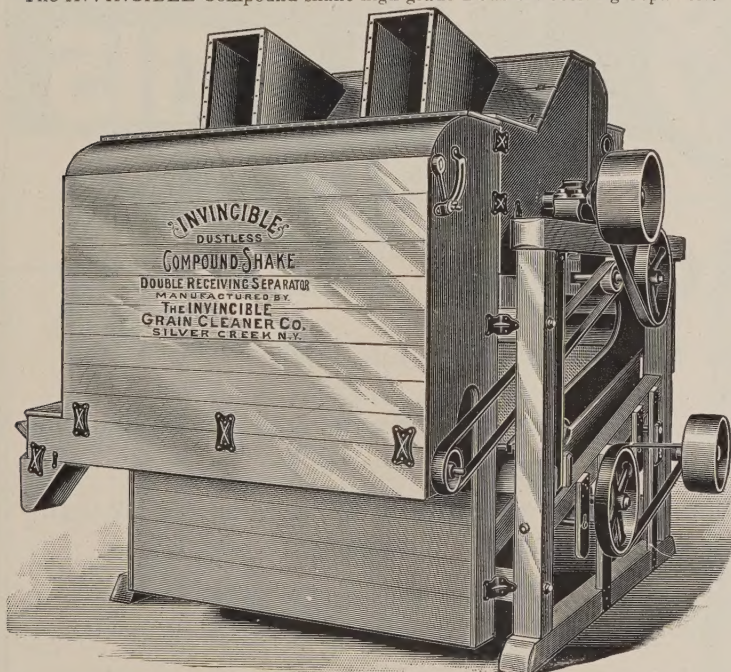
We are in a position to offer to the grain trade a line of Grain Cleaning Machinery that surpasses anything manufactured.

Write for complete catalog.

J. L. OWENS COMPANY,
615 Superior St., S. E., MINNEAPOLIS, MINN.

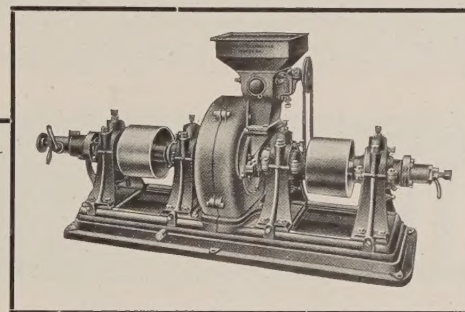
GET THE BEST

The INVINCIBLE Compound shake HIGH-GRADE Separators.
No shake, no tremble, run perfectly steady. Can be placed anywhere in the elevator.
The INVINCIBLE Compound shake high-grade Double Receiving Separator.



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N. B. Trask, Lochiel Hotel, Harrisburg, Pa.
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Monarch Attrition Mills

Are the ideal grinders for elevator owners who desire to add a profitable side line to their regular grain business. Feed grinding is profitable if you have a mill that does the work in a satisfactory, economical manner. Monarchs do this because they have great capacity and consume relatively little power.

You Can Test Them

on your own floor and prove that all our claims are based on actual performance. Every mill is sold under a strong guarantee, and if it does not come up to the guarantee we don't want you to keep it.

Our Latest Catalogue

gives all particulars and tells why the Monarch has phosphor-bronze interchangeable bearings; cable-chain oilers; double movable base; safety spring; quick release; relief spring; special adjustable three-pulley drive; hammered steel shafting; ball bearings, and other features not found in competing mills. It is FREE for the asking.

What do you grind the most of—Let us send you samples for comparison

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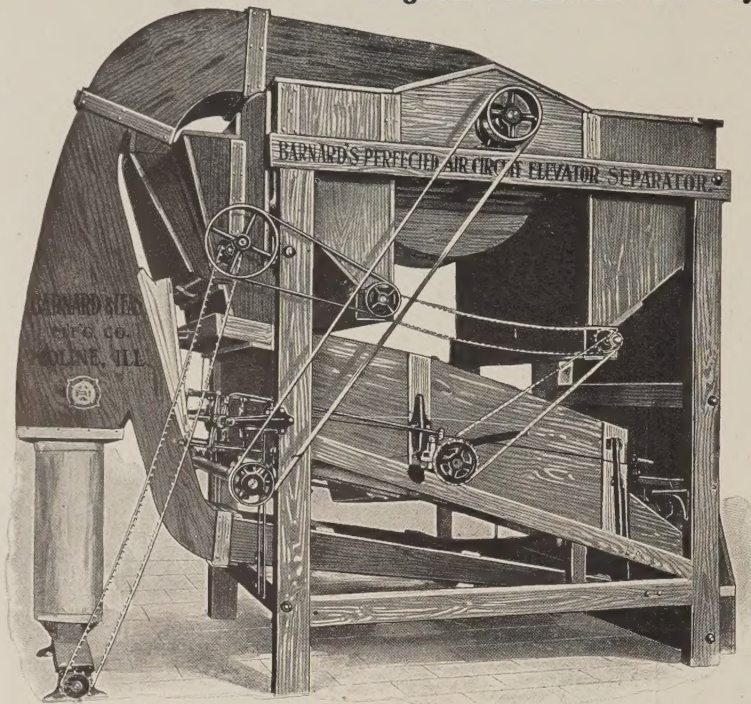
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Barnard & Leas Mfg. Co.

MONEY WELL SPENT

The Perfected Air Circuit Separator is
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MINNEAPOLIS, MINN., Oct. 20, 1905.

BARNARD & LEAS MFG. CO.

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We are very much pleased to be able to express our entire satisfaction with the work of your Perfected Air Circuit Separator which we purchased of you some months ago. We know it is money well spent.

Yours truly,

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We have 23 of these machines working satisfactorily in the new plant of the American Cereal Co., at Cedar Rapids, Iowa.

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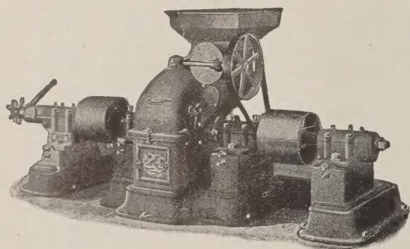
The Unique Attrition Mill

FULL MEASURE IS THE TRADE MARK OF THE UNIQUE

Full measure as to capacity for size of mill, quality of work and beauty of design and finish.

The full measure of satisfaction which users derive from it is a certain guarantee of its perfection in every detail.

The feed grinding season is again here and if you want a machine adapted to your needs and one as near perfect as human ingenuity can make it, order the Unique.



Further Particulars on Application

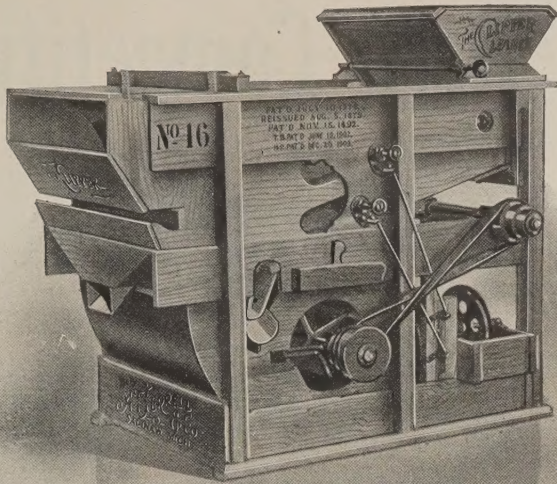
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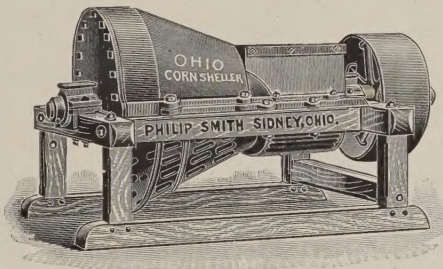
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Your profits as well as your business will increase if you do. "Clipper" Cleaners stand for all that is best in grain, seed and bean cleaning machinery, and we challenge any manufacturer of grain cleaners to produce as good a combination machine as the "Clipper."

Our success has tempted others to manufacture and offer for sale CHEAP IMITATIONS, poorly made and badly finished. The "Clipper," Peer of Them All, is still made upon honor, of the best materials, by high-class, well paid mechanics and sold at a price consistent with a living profit. Write for catalog and let us give you particulars.

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Drags, Dumps, Etc.

When you want any machinery
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For more than thirty years it has been our policy to build and equip grain elevators, "a whole lot better" than the other fellow, and we have done it. That's why we have so many satisfied patrons. Are you one? If not, get in line to-day by sending us your specifications.

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Anti-Freezing Solution

For Gasoline Engines and Fire Barrels

Absolutely neutral. Will not rust. Has no effect on metal of any kind. Freezing point 54 degrees below zero. Never precipitates nor evaporates. You don't have to refill fire barrels. It's permanent.

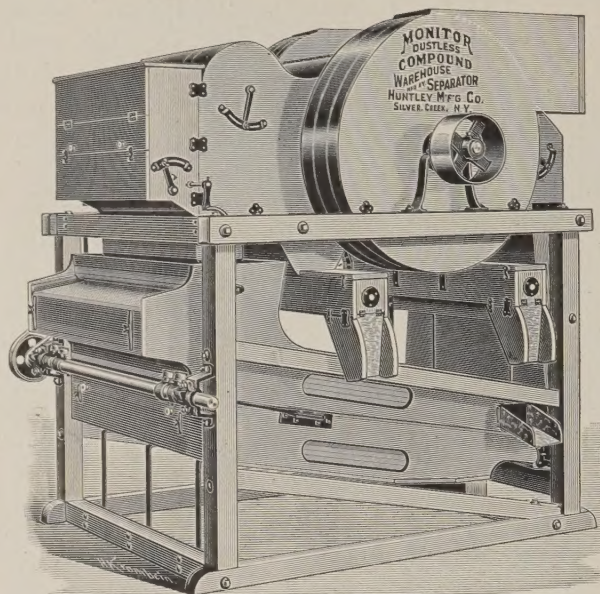
We give a SALOMETER FREE

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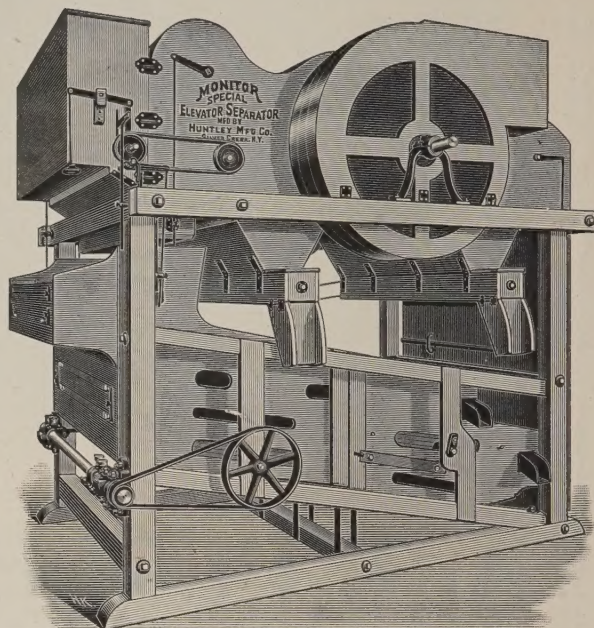
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A Winning Combination

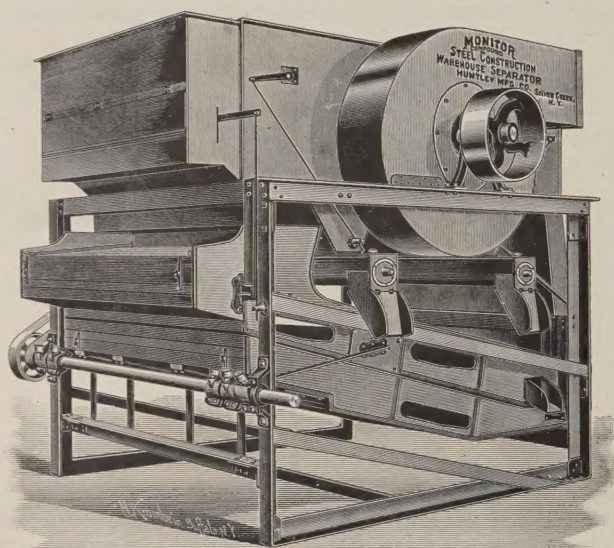
Four Monitors That Defy Competition



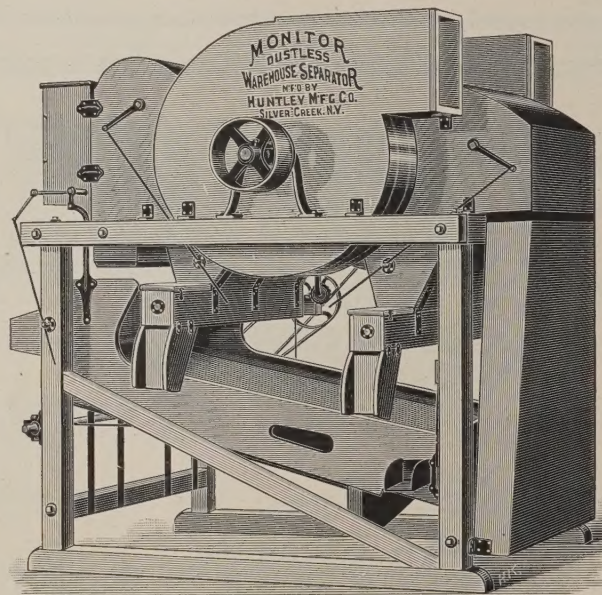
Monitor Dustless Compound Shake Warehouse Separator.



Monitor Special Double Shoe Separator.



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These four sturdy Monitor machines pictured here—every line of which speaks of quality and durability—represent the largest and best line of machines on the market. That they are efficient is evidenced by the fact that there are more than 10,000 of them now in use. Send for Monitor Catalog.

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